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A Prelims IAS Academy

CURRENT AFFAIRS COMPILATION

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UPSC PRELIMS 2025 EXAM

CURRENT AFFAIRS COMPILATION

GOALTIDE IAS ACADEMY

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Introduction

Hello Everyone,

Every year more than 50 percent of the Prelims Paper is based on Current Affairs. It become important for us to have very good command on Current Affairs. Hundreds of publications are available in market. Aspirants are always confused how to prepare Current Affairs and most of the times they end up choosing wrong publications. We will not let you fall in this trouble. Three important courses are running simultaneously on our website for Current Affairs from Monday to Friday- **Daily Quiz section, Daily Current Affairs section and Daily News Section.**

Daily Quiz will help you do the best preparation to handle any question in UPSC Prelims Exam, Daily News section contains best opinion based Articles important for your Mains Exam and Daily Current Affairs section will give you best Current Affairs which is relevant for you Exam from all important sources (PIB+ all government websites, The Hindu+ 10 different newspaper, etc.). Nothing will be missed. This document is related to Current Affairs section.

You might find it bulky but don't worry. It contains lot of images to simplify your understanding.

Hope you enjoy reading.

Thanks,

Abhishek Agarwal

Founder, GoalTide IAS Prelims Academy

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CA1. Who is a counting agent and what are their roles and responsibilities?

A counting agent is the representative of a candidate (independent or nominated by a political party) who is contesting elections to parliament or the state legislatures.

Under the law, counting of votes is to be done under the supervision and direction of the Returning Officer of the constituency in the presence of the candidates and their agents.

Eligibility:

The law does not prescribe any qualification for a person to be appointed as a Counting Agent. However, the candidates are advised to appoint persons of the age of 18 years and above as their Counting agents so that their interests are properly watched during counting of votes.

What is the function of counting agents?

The counting agent's job is to observe the counting process from the start till the end, and to report any irregularities that they notice, so that they may be rectified.

The presence of counting agents is an absolute must to ensure that the counting of votes cast by electors takes place strictly in accordance with established systems and procedures. Election laws and rules, as well as the guidelines issued by the EC, from time to time lay down these systems and procedures.

The following persons are not appointed as Counting Agent of a Candidate during an election:

3.1.2 Since security personnel are not allowed to enter the counting hall as per standing instructions of the Election Commission, the following persons cannot be appointed as Counting Agent of a Candidate during an election:-

- ✓ a) Sitting Minister either of Union Government or of State Government, Member of Parliament or state Legislature
- ✓ b) Mayor of a Corporation or Chairperson of Municipality/Zila Parishad/Panchayat Union, etc.
- ✓ c) Chairpersons and Members of Central PSUs/State PSUs, Govt. Bodies/ Corporation.
- ✓ d) Persons receiving any honorarium from Government or Persons working on part time in any Govt./ Govt. Aided Institutions.
- ✓ e) Para Medical/Healthcare staff working in Govt./Govt. Aided institutions, Fair Price Shop dealers, Anganwadi Employees.
- ✓ f) Person in the service of the Government [This is an offence and Under Section 134-A of the R.P. Act 1951 and such appointees are punishable with imprisonment for a term which may extend to 3 (three) months, or with fine, or with both].

There is no prohibition against appointment of Gram Panchayat Pradhan/Gram Panchayat Sarpanch/Panchayat members, Councilors or Members of Municipal Corporation or Municipality and local persons, who are residents of the constituency, as Counting Agents of Candidates. There is no prohibition in appointing an NRI who is a citizen of India as Counting Agent.

Any other person having security cover provided by the State (both Union and State Govts.) shall not be allowed to act as Election Agent or Counting Agent of any candidate during an election even if they surrender or decide to relinquish their security.

Do counting agents have the right to handle the electronic voting machines (EVMs) and postal ballots during the counting process?

No, they do not have the right to handle either EVMs or postal ballots. They can only watch the counting process from behind a barricade or wire-mesh that separates them and the tables where counting takes place.

It is the RO's responsibility to ensure that the counting process is fully visible to every counting agent from behind the barricade or wire-mesh. See the sample image of a counting hall below.

CA2. World Health Assembly

News:

HEALTH

World Health Assembly defines pandemic emergency, pledges improved access to medical products & financing

Critical amendments to International Health Regulations adopted by WHO member countries

In a landmark achievement in the global health security agenda, the 77th World Health Assembly agreed to the package of amendments to the International Health Regulations (IHR 2005) based on 300 proposals made by member countries after the Covid-19 pandemic.

The targeted amendments to the International Health Regulations (IHR) aim at

- improving countries' ability to prepare for and respond to Public Health Emergencies of International Concern (PHEIC) and Pandemic Emergencies (PE).
- They include provisions for facilitating equitable access to relevant health products during PHEIC and PE, as well as
- mobilizing financial resources to support developing countries in building, strengthening, and maintaining the core capacities required under the IHR (2005).

Important here is World Health Assembly.

The World Health Assembly is the decision-making body of WHO. It is attended by delegations from all WHO Member States and focuses on a specific health agenda prepared by the Executive Board.

The **main functions of the World Health Assembly** are to determine the policies of the Organization, appoint the Director-General, supervise financial policies, and review and approve the proposed programme budget.

The Health Assembly is held annually in Geneva, Switzerland.

Also see WHO,

Constitution of the World Health Organization

The Constitution was adopted by the International Health Conference held in New York from 19 June to 22 July 1946, signed on 22 July 1946 by the representatives of 61 States and entered into force on 7 April 1948. Later amendments are incorporated into this text.

CA3. KAZA Summit 2024: Leaders decide to fight ivory trade ban at CITES CoP20

News:

AFRICA

KAZA Summit 2024: Leaders decide to fight ivory trade ban at CITES CoP20

Members of the five-nation Kavango-Zambezi Trans-Frontier Conservation Area accuse the West of double standards but decide to give dialogue a chance

By Cyril Zenda
Published: Sunday 02 June 2024

KAZA states, **who hold a combined 227,000 elephants – more than half the total African population** – are holding a summit in Zambia and have urged CITES to allow more ivory and elephant sales.

As per the KAZA **ivory trade was a key part of the country's conservation plan**. They want lifting of the ban on ivory trade at the 20th meeting of the Conference of Parties (CoP20) of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

Trade in ivory was internationally banned in 1989, when CITES (Convention on International Trade in Endangered Species) Parties listed the African elephant on Appendix I.

About KAZA:

Kavango-Zambezi Trans-Frontier Conservation Area (KAZA-TFCA) lies in the Kavango and Zambezi River basins where Angola, Botswana, Namibia, Zambia, and Zimbabwe converge.



About CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora)

It is an international agreement between governments. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten the survival of the species.

Convention text

CITES was drafted as a result of a resolution adopted in 1963 at a meeting of members of IUCN (The World Conservation Union). The [text of the Convention](#) was finally agreed at a meeting of representatives of 80 countries in Washington, D.C., United States of America, on 3 March 1973, and on 1 July 1975 CITES entered in force. The original of the Convention was deposited with

Why CITES was needed?

If I ask you one question, CITES was formed to restrict the international trade, what will be your answer.

The answer is NO. Because it was mainly needed **to regulate the trade, NOT RESTRICT**.

Because the trade in wild animals and plants crosses borders between countries, the effort to regulate it requires international cooperation to safeguard certain species from over-exploitation. CITES was conceived in the spirit of such cooperation. Today, it accords varying degrees of protection to more than 40,000 species of animals and plants, whether they are traded as live specimens, fur coats or dried herbs.

Parties of the Convention

CITES is an international agreement to which States and regional economic integration organizations adhere voluntarily. States that have agreed to be bound by the Convention ('joined' CITES) are known as Parties.

Although CITES is legally binding on the Parties – in other words they have to implement the Convention – **it does not take the place of national laws**. Rather it provides a framework to be respected by each Party, which has to adopt its own domestic legislation to ensure that CITES is implemented at the national level.

India ratified CITES in July, 1976 and entered to force in October 1976.

25	India	IN	Asia	Ratification	20 Jul 1976	18 Oct 1976
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CA4. Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge

News:

WIPO Member States Adopt Historic New Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge

Geneva, May 24, 2024
PR/2024/919

WIPO member states approved a groundbreaking new Treaty related to intellectual property (IP), genetic resources and associated traditional knowledge, marking a historic breakthrough that capped decades of negotiations.

This is the first WIPO Treaty to address the interface between intellectual property, genetic resources and traditional knowledge and the first WIPO Treaty to include provisions specifically for Indigenous Peoples as well as local communities.

The Treaty, once it enters into force with 15 contracting parties, will establish in international law a new disclosure requirement for patent applicants whose inventions are based on genetic resources and/or associated traditional knowledge. A signing ceremony is scheduled for later today.

What Does the Treaty Do?

Broadly, where a claimed invention in a patent application is based on genetic resources, each contracting party shall require applicants to disclose the country of origin or source of the genetic resources. Where the claimed invention in a patent application is based on traditional knowledge associated with genetic resources, each contracting party shall require applicants to disclose the Indigenous Peoples or local community, as applicable, who provided the traditional knowledge.

What are Genetic Resources and associated Traditional Knowledge?

Genetic resources are contained in, for example, medicinal plants, agricultural crops, and animal breeds. While genetic resources themselves cannot be directly protected as intellectual property, inventions developed using them can, most often through a patent.

Some genetic resources are also associated with traditional knowledge through their use and conservation by Indigenous Peoples as well as local communities, often over generations. This knowledge is sometimes used in scientific research and, as such, may contribute to the development of a protected invention.

Negotiations for this Treaty began at WIPO in 2001, initiated in 1999 with a proposal by Colombia.

The treaty is important to India as the country holds 7-8 per cent of global biodiversity and a rich repertoire of knowledge based on these genetic resources.

The treaty will enter force after 15 parties ratify it. After adoption, the treaty was opened for signature.

CA5. Initiative to eliminate the use of mercury in medical devices

News:



Who we are ▾

Where we work ▾

What we do ▾

Publications & data

\$134-million initiative aims to eliminate mercury-containing medical devices

The **Governments of Albania, Burkina Faso, India, Montenegro and Uganda** have united to combat chemical pollution, launching a \$134-million project to eliminate the use of mercury in medical devices.

Medical thermometers and sphygmomanometers (devices which measure blood pressure) contain mercury and are harmless as long as they remain intact.

Led by the United Nations Environment Programme (UNEP), with funding from the Global Environment Facility (GEF) and executed by the World Health Organization (WHO),

the Phasing out mercury measuring devices in healthcare project will develop and implement nation-wide strategies to stop the import, export and manufacture of thermometers and sphygmomanometers, encourage the adoption of accurate, affordable, and safe mercury-free alternatives, while improving the management of mercury-containing medical waste.

What is the Minamata Convention on Mercury?

The Minamata Convention on Mercury is a global treaty **to protect human health and the environment from the adverse effects of mercury and its compounds.**

It was agreed at the fifth session of the Intergovernmental Negotiating Committee in Geneva, Switzerland 2013.

India has ratified the Convention.

Press Information Bureau
Government of India
Ministry of Environment, Forest and Climate Change

07 FEB 2018 8:49PM by PIB Delhi

Cabinet approves Ratification of the Minamata Convention on Mercury

The Union Cabinet chaired by the Prime Minister Shri Narendra Modi has approved the proposal for ratification of Minamata Convention on Mercury and depositing the instrument of ratification enabling India to become a Party of the Convention.

The approval entails Ratification of the Minamata Convention on Mercury along with flexibility for continued use of mercury-based products and processes involving mercury compound up to **2025**.

CA6. Small Island Developing States

News:



Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States

Search

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Home - UN Conference on Small Island Developing States delivers new era of resilience amidst SIDS' crippling debt crisis

UN Conference on Small Island Developing States delivers new era of resilience amidst SIDS' crippling debt crisis

The Fourth United Nations Conference on Small Island Developing States (SIDS4) held recently in Antigua and Barbuda with unanimous support for a bold new 10-year plan of action that will deliver meaningful change for this group of vulnerable countries.

The major outcome of the SIDS4 Conference, The Antigua and Barbuda Agenda for SIDS (ABAS) - a Declaration for Renewed Prosperity - puts forth a new, ambitious pathway for SIDS' sustainable development.

Small Island Developing States (SIDS) are a distinct group of 39 States and 18 Associate Members of United Nations regional commissions that face unique social, economic and environmental vulnerabilities.

The three geographical regions in which SIDS are located are: the Caribbean, the Pacific, and the Atlantic, Indian Ocean and South China Sea (AIS).

SIDS were recognized as a special case both for their environment and development at the 1992 United Nations Conference on Environment and Development held in Rio de Janeiro, Brazil.

You will locate today all 39 countries in your map book today:

✓ Small Island Developing States

- | | | |
|------------------------|--------------------------------------|------------------------------------|
| 1. Antigua and Barbuda | 15. Haiti* | 29. St. Kitts and Nevis |
| 2. Bahamas | 16. Jamaica | 30. St. Lucia |
| 3. Barbados | 17. Kiribati* | 31. St. Vincent and the Grenadines |
| 4. Belize | 18. Maldives | 32. Seychelles |
| 5. Cabo Verde | 19. Marshall Islands | 33. Solomon Islands* |
| 6. Comoros* | 20. Micronesia (Federated States of) | 34. Suriname |
| 7. Cook Islands | 21. Mauritius | 35. Timor-Leste* |
| 8. Cuba | 22. Nauru | 36. Tonga |
| 9. Dominica | 23. Niue | 37. Trinidad and Tobago |
| 10. Dominican Republic | 24. Palau | 38. Tuvalu* |
| 11. Fiji | 25. Papua New Guinea | 39. Vanuatu |
| 12. Grenada | 26. Samoa | |
| 13. Guinea-Bissau* | 27. São Tomé and Príncipe* | |
| 14. Guyana | 28. Singapore | |

* Also Least Developed Country

CA7. Milpa plantations in Mexico

News:



The system uses intercropping, meaning many different crop species are grown together in the same space. It is quite the opposite of monoculture here, with each family growing a variety of nutritious crops.

A conventional milpa includes maize (*Zea mays*), also known as corn, beans (e.g. *Phaseolus* species) and squash (e.g. *Cucurbita* species), as well as many useful herbs including chillies (*Capsicum* species).

Maize was selectively used for milpa agriculture, to have strong stems to support climbing beans, allowing them access to light. These beans improve soil health by fixing nitrogen, an essential plant nutrient. The large sprawling leaves of the squash shade the soil, reducing moisture loss and preventing weed growth.

Maize is also helping in providing nutrition to Mexicans.

CA8. Three new initiatives of RBI

News:

RBI unveils Pravaah portal, Retail Direct Mobile App and FinTech Repository

Published – May 28, 2024 10:41 pm IST – MUMBAI

The Reserve Bank of India (RBI) has launched three significant initiatives aimed at enhancing regulatory processes and improving access to financial services: **the PRAVAAH portal, the retail direct mobile app, and a fintech repository.**

PRAVAAH Portal:

PRAVAAH (Platform for Regulatory Application, Validation and Authorisation) is a secure and centralized web-based portal designed for individuals and entities to seek authorization, licenses, or regulatory approvals from the RBI.

Retail Direct Mobile App:

The retail direct mobile app is designed to provide retail investors with seamless and convenient access to the retail direct platform. This app facilitates easy transactions in government securities (G-Secs), thereby promoting greater participation in the government securities market by retail investors.

Fintech Repository:

The fintech repository is a comprehensive database containing information on Indian fintech firms. This repository aims to provide better insights into the fintech sector from a regulatory perspective, helping in the formulation of appropriate policy approaches and ensuring informed decision-making.

CA9. World's Largest Grain Storage Plan

News:

Home • Top Stories • National coordination committee begins work on world's largest grain st...

03/06/24 | 7:41 pm | Grain storage plan | NLCC | PACS | PMFME



National Coordination Committee Begins Work On World's Largest Grain Storage Plan

Always read the background:

India holds 11% (16 Crore Hectare) of World's total Cultivable Area (138 Crore Hectare) and 18% (140 Crore) of Total World Population (790 Crore). This means that to meet the food requirement of the 18% of World Population, India only has 11% of Cultivable Land. Based on the FAO Statistical Data 2021, total Food Grain Production in India is 311 MMT and total Storage Capacity in India is only 145 MMT, i.e., **there is a shortage of 166 MMT of Storage**. There is surplus Storage capacity in other countries 131%, while in India there is a shortfall of 47%.

Recognizing the significance of cooperatives as a potent force for economic growth, the Ministry of Cooperation has introduced an unprecedented initiative—the 'World's Largest Grain Storage Plan in Cooperative Sector.'

What is the plan?

This plan aims establishing diverse agricultural infrastructure at the level of Primary Agricultural Credit Societies (PACS), encompassing warehouses, custom hiring centres, processing units, and more.

By elevating PACS into multifunctional entities, this strategy aims to reduce food grain wastage through enhanced storage capacity, fortify the nation's food security, and empower farmers to command better prices for their produce.

Objective of the Project:

Decentralization of Grain Storage in India and benefits of the same at PACS level

- Reduction of Post Harvest losses from existing 6%
- Drastic reduction on multiple handling and transportation cost
- Prevention of distress sale by farmers at low rates
- Decentralized procurement by FCI/State Government
- Storage based "Hub" and "Spoke" model

Implementation Plan:

An Inter-Ministerial Committee (IMC) has been formed under the leadership of the Minister of Cooperation. Their role is to adapt guidelines and implementation approaches.

This adaptation aims to facilitate the realization of the 'World's Largest Grain Storage Plan in Cooperative Sector.' This initiative involves creating infrastructure such as primarily at selected viable Primary Agricultural Credit Societies (PACS) **in 24 States /Union Territories.**

CA10. World Environment Day

Read:

Our Land. Our Future
We are
#GenerationRestoration



**WORLD
ENVIRONMENT
DAY**



**Kingdom of
Saudi Arabia**
2024

World Environment Day, held annually on 5 June. **The event has been led by the United Nations Environment Programme (UNEP) since its inception in 1973.**

The UN General Assembly designated 5 June as World Environment Day, marking the first day of the Stockholm Conference on the Human Environment. Another resolution, adopted by the General Assembly the same day, **led to the creation of UNEP.**

This year's World Environment Day campaign focuses on land restoration, desertification, and drought resilience under the slogan "Our land. Our future. The Kingdom of Saudi Arabia will host the 2024 World Environment Day global celebrations.

Has India hosted this event before?

India hosted two such events in **2011 and 2018.**

~~2018~~, **India** | **Beat Plastic Pollution #BeatPlasticPollution**

The 45th celebration of World Environment Day was under the theme "Beat Plastic Pollution." Over 6,000 people gathered at Versova Beach in Mumbai to join UN

~~2011~~, **India** | **Forests: Nature at Your Service**

Date is important here. They can ask you statements based on year. Kya CPCB India main same time par form huatha, Ky UNEP bhi same year ko form huatha? So, year yaadrhegatoth you can answer all of them.

CA11. Hunger Hotspots by FAO

News:



**Food and Agriculture Organization
of the United Nations**

English  

About FAO ▾

News ▾

Multimedia ▾

Main topics ▾

Statistics ▾

Members ▾

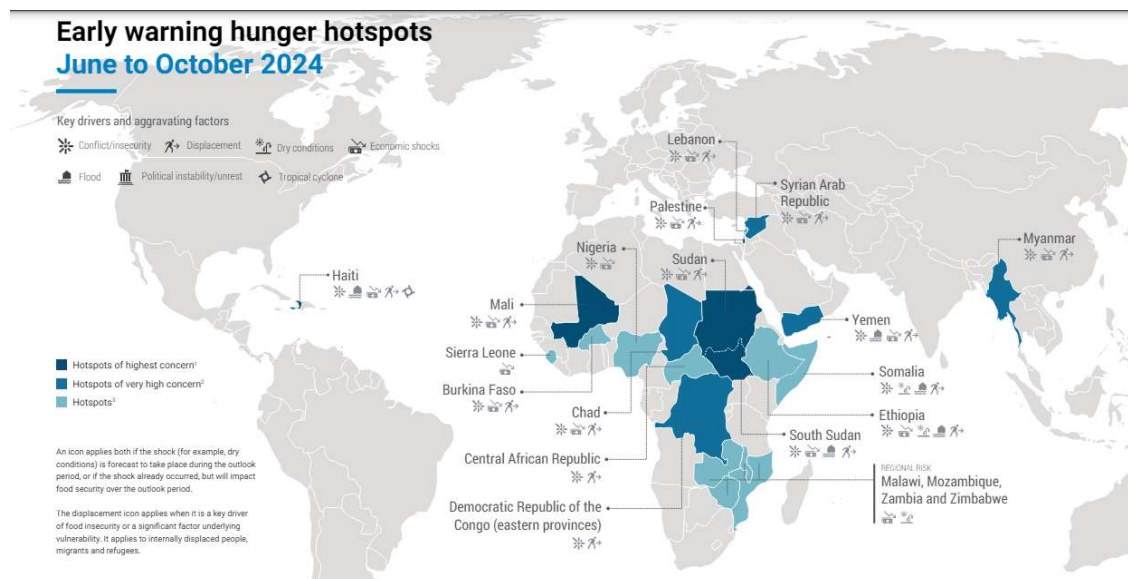
Publications ▾

Hunger Hotspots Report: famine looms in Gaza while risk of starvation persists in Sudan, Haiti, Mali, and South Sudan

Latest Hunger Hotspots report urges immediate action to prevent famine and warns of La Niña-linked climate extremes

The Hunger Hotspots - FAO/WFP early warnings on acute food insecurity report is part of a series of analytical products produced under the Global Network Against Food Crises initiative, **to enhance and coordinate the generation and sharing of evidence-based information and analysis for preventing and addressing food crises.**

According to the latest Hunger Hotspots report, – the **Food and Agriculture Organization of the United Nations (FAO)** and the **United Nations World Food Programme (WFP)** – warn that acute food insecurity is set to worsen in 18 hunger hotspots



Reason for such hotspots:

Increasing outbreaks of conflict, extreme weather events and economic downturns will continue to push already vulnerable people into hunger, if appropriate action is not taken.

CA12. United Nations Global Supply Chain Forum

News:

UN Global Supply Chain Forum calls for resilience amid world trade disruptions

28 May 2024

Efforts to decarbonize global shipping while promoting investments and digital solutions will be key to enhancing supply chain resilience for small island developing states.

The UN Trade and Development (UNCTAD) and the Government of Barbados will organize the **first Global Supply Chain Forum** in **Barbados** from 21 to 24 May 2024.

Ek baaraap map dekh lo:



Why this forum?

1. Global disruptions are causing ships to spend more days at sea and emit higher levels of greenhouse gases, highlighting the growing unreliability and uncertainty of our interconnected world.
2. Against this backdrop, UN Trade and Development Secretary spotlighted the **urgent need to make global production and distribution networks more inclusive, sustainable, and resilient**.
3. The forum addressed the compounded effects of climate change, geopolitical tensions, and the COVID-19 pandemic on global supply chain.
4. The forum highlighted the complexities and opportunities **in decarbonizing global shipping**, focusing on developing countries with renewable energy resources.

One of the major outcomes of the forum was the launch of the ***“Manifesto for Intermodal, Low-Carbon, Efficient and Resilient Freight Transport and Logistics.”***

This manifesto calls for a significant transformation in freight transport to achieve global climate targets and improve socio-economic resilience, emphasizing the transition to zero-emission fuels, optimized logistics, and sustainable value chains.

A significant achievement of the forum was the launch of the UN Trade and Development Trade-and-Transport Dataset, developed in collaboration with the World Bank.

The second forum will be held in Saudi Arabia in 2026.

CA13. Indo-Pacific Economic Framework for Prosperity (IPEF)

News:

India attends Indo-Pacific Economic Framework for Prosperity (IPEF) Ministerial meeting in Singapore

Posted On: 06 JUN 2024 4:55PM by PIB Delhi

In May 2022, at Tokyo, Japan, the **United States launched the Indo-Pacific Economic Framework for Prosperity (IPEF)** with Australia, Brunei Darussalam, Fiji **India**, Indonesia, Japan, the Republic of Korea, Malaysia, New Zealand, Philippines, Singapore, Thailand, and Vietnam.

What this framework will do?

This framework will advance resilience, sustainability, inclusiveness, economic growth, fairness, and competitiveness for our economies. Through this initiative, the IPEF partners aim to contribute to cooperation, stability, prosperity, development, and peace within the region. This framework will offer tangible benefits that fuel economic activity and investment, promote sustainable and inclusive economic growth, and benefit workers and consumers across the region. The 14 IPEF partners represent 40 percent of global GDP and 28 percent of global goods and services trade.

The framework is structured around four pillars relating to Trade (Pillar I); Supply Chains (Pillar II); Clean Economy (Pillar III); and Fair Economy (Pillar IV).

CA14. A new study about the origin of Baobab trees

News:



Home News Sport Business Innovation Culture Travel Earth Video Live

Scientists solve mystery of ancient 'tree of life'

According to DNA studies, the iconic trees **first arose in Madagascar** 21 million years ago. Their seeds were later carried on ocean currents to Australia and also to mainland Africa, evolving into distinct species.

Importance of Baobab trees:

Baobabs are known as “the tree of life” because they support the surrounding ecosystem and the many forms of life that live in their hollow trunks, nest on and in their branches, and eat their nectar and fruits. The root systems are massive and help to slow down soil erosion and recycle nutrients.

The massive trunks are hollow cylinders of low-quality wood containing many water-filled living cells. Some of the largest and oldest baobab trees in Australia have been estimated to hold more than 100,000 litres of water. **The water-filled cells of the trunk generate a hydrostatic pressure that gives the tree strength (the water acting a bit like air in a bouncy castle).**



Baobab flowers are large and have evolved alongside large nocturnal, sugar eating animals like hawk moths, fruit bats and the lemurs of Madagascar.

In India, presently, it is found today in the Kutch and Kathiawar peninsula, Goa, Malwa and the south-central Deccan plateau in Andhra Pradesh.

CA15. Nagi & Nakti recognised under Ramsar Convention

News:

ENVIRONMENT

Bihar: Human-made wetlands Nagi & Nakti recognised under Ramsar Convention

The inclusion of the two bird sanctuaries in the Ramsar Convention has taken the total number of Ramsar sites in India to 82

By Mohd Imran Khan

Published: Thursday 06 June 2024

From the Ramsar site:

Overview

Downloads

The Site was created following the damming of the Nagi River, which enabled the gradual formation of water bodies with clear water and aquatic vegetation. The catchment area, largely dry deciduous forest, is surrounded by hills. Due to its importance for migratory bird species, the Site was recognized locally as a Bird Sanctuary in 1984, and internationally as an Important Bird and Biodiversity Area (IBA) by BirdLife International. Threatened migratory species that winter at the Site include the critically endangered Baer's pochard (*Aythya baeri*) and the endangered steppe eagle (*Aquila nipalensis*). Overall, the wetland and its fringes provide habitat for over 75 bird species, 33 fish, and 12 aquatic plants. Notably, the Site hosts one of the largest congregations of bar-headed goose (*Anser indicus*) on the Indo-Gangetic plain. Additionally, the wetland provides a reliable source of water for the irrigation of over 9,800 acres of agricultural land, and serves as a location for recreation, tourism, and educational activities.

Overview

Downloads

The Site is a man-made wetland which was developed primarily for irrigation through the construction of Nakti Dam. Since the dam's construction, the wetland and its surrounding area have provided habitat for over 150 species of birds, mammals, fish, aquatic plants, and reptiles and amphibians. They include globally threatened species, including the endangered Indian elephant (*Elephas maximus indicus*) and a vulnerable native catfish (*Wallago attu*). The catchment area is largely dry deciduous forest, and is surrounded by hills. In 1984, the wetland was designated as a Bird Sanctuary, highlighting its importance as a wintering habitat for several migratory species, with over 20,000 birds congregating during winter months. This includes one of the largest congregations of red-crested pochard (*Netta rufina*) on the Indo-Gangetic plain. Alongside its function supporting the agricultural and domestic water demands of local communities, the Site is popular as a recreational birdwatching site.

Ramsar Convention is an international convention to conserve wetlands and was signed in 1971 in the Iranian city of Ramsar.

The inclusion of the two bird sanctuaries in the Ramsar Convention has taken the total number of Ramsar sites in India to 82.

CA16. Solar-geoengineering

Geoengineering is conventionally split into two broad categories:

The **first is carbon geoengineering, often also called carbon dioxide removal (cdr)**. The other is solar geoengineering, often also called **solar radiation management (srm)**, albedo modification, or sunlight reflection. There are large differences.

Now, lets see both the terms:

Carbon geoengineering seeks to remove carbon dioxide from the atmosphere, which would address the root cause of climate change — the accumulation of carbon dioxide in the atmosphere. In the chain from emissions to concentrations to temperatures to impacts, it breaks the link from emissions to concentrations.

Solar geoengineering seeks to **reflect a small fraction of sunlight back into space or increase the amount of solar radiation that escapes back into space to cool the planet**. In contrast to carbon geoengineering, solar geoengineering does not address the root cause of climate change. It **instead aims to break the link from concentrations to temperatures, thereby reducing some climate damages**.

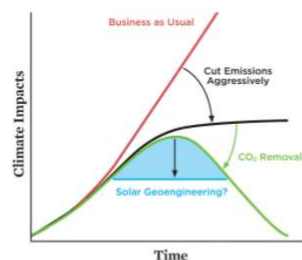
Why is solar geoengineering being considered?

Solar geoengineering would not address the root cause of climate change: emissions of heat-trapping gases, mostly from the burning of fossil fuels. It would not limit ocean acidification or the many harmful impacts on public health and the environment from fossil fuel use.

So why research it?

Because even as we take critical steps to slow climate change, they may not be enough to limit warming to the levels needed to avoid catastrophic consequences. Limiting global temperature increase to the Paris Agreement's target of "well below 2°C above preindustrial levels and pursuing efforts to limit the temperature increase to 1.5°C" requires that the United States and other nations bring net global carbon dioxide (CO₂) emissions to zero by no later than mid-century, alongside deep cuts in emissions of other heat-trapping gases.

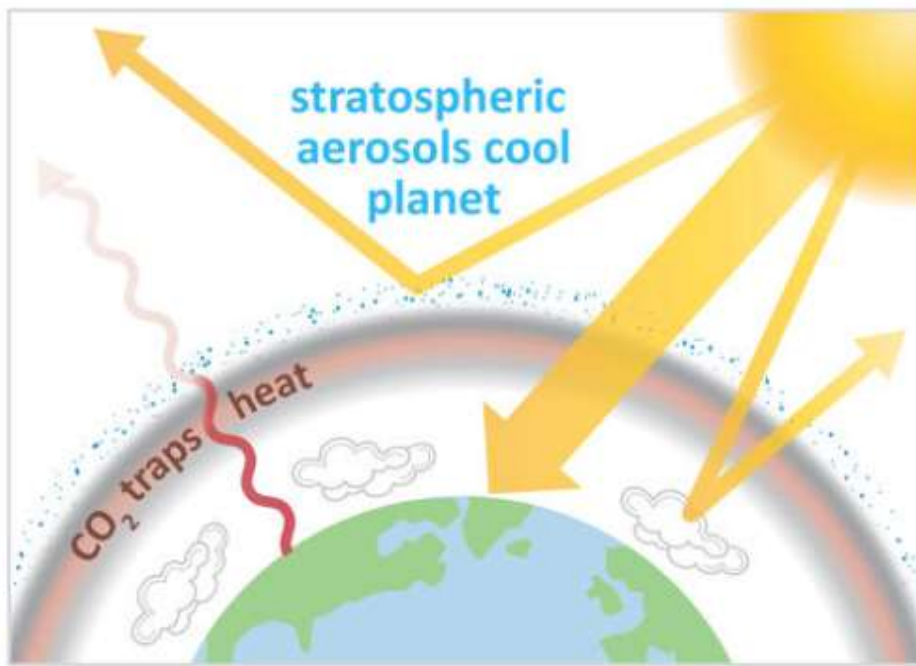
A Potential Relationship between Different Responses to Climate Change



A potential relationship between different responses to climate change. Source: UCS

Different Technologies:

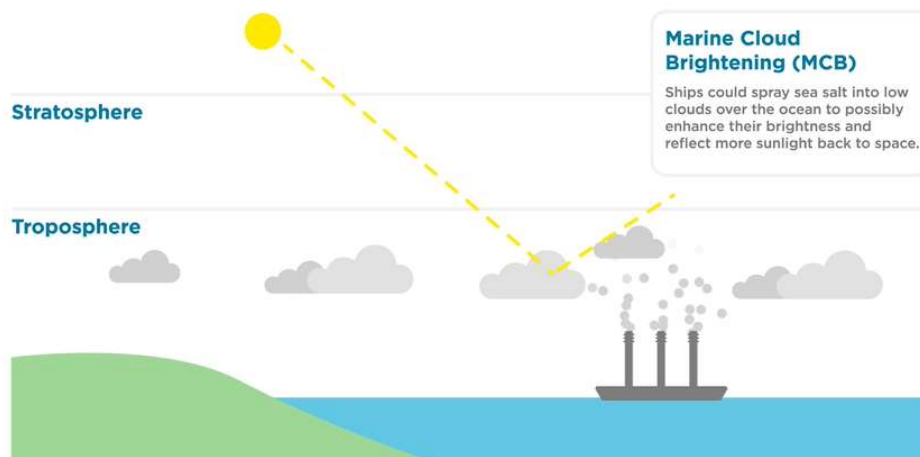
There are several proposed solar geoengineering technologies. These include marine cloud brightening, cirrus cloud thinning, space-based techniques, and stratospheric aerosol scattering, amongst others.



SOLAR GEOENGINEERING

Marine cloud brightening would attempt to brighten marine clouds to reflect more sunlight back into space.

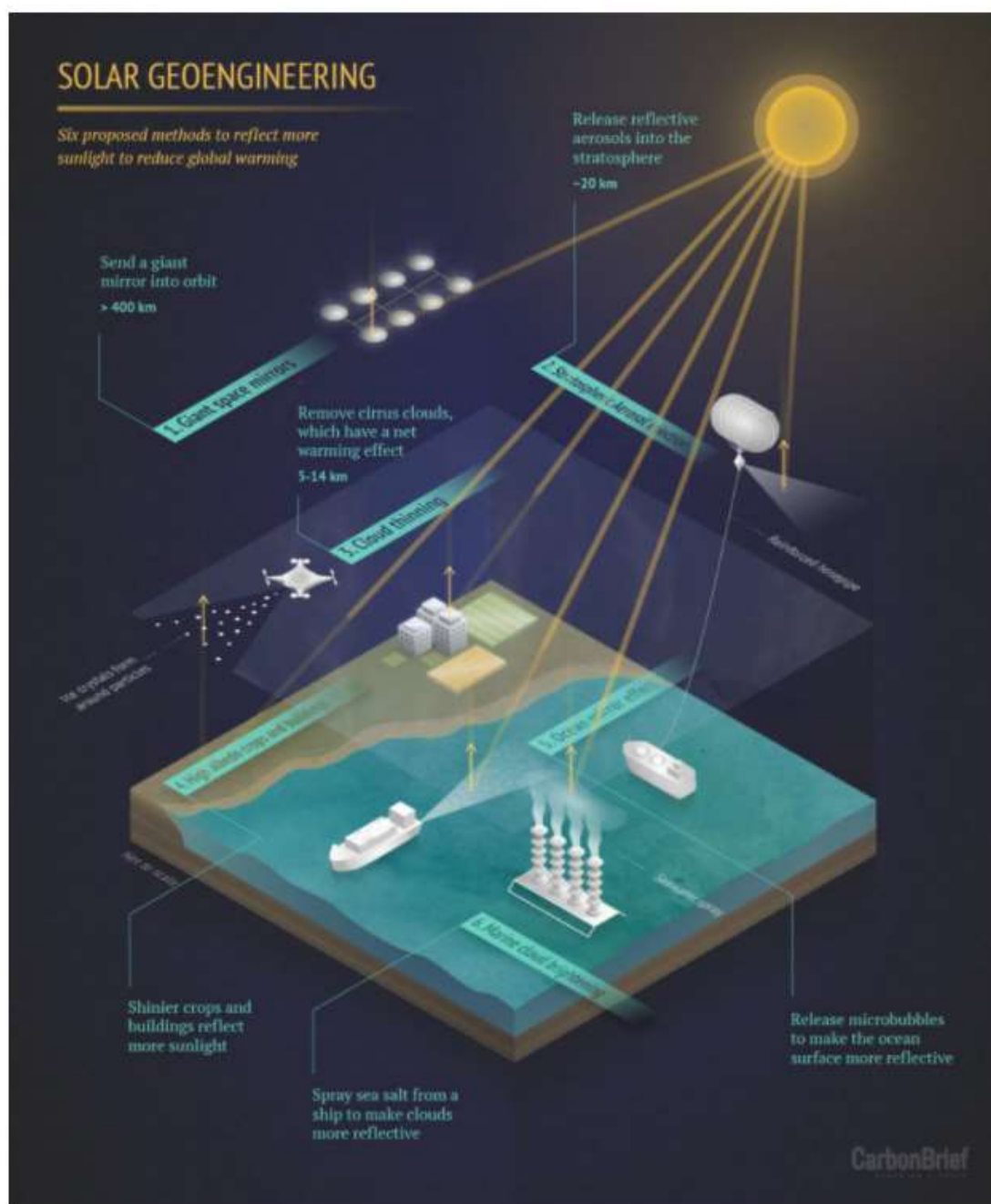
How Might Solar Geoengineering Cool the Earth?



Cirrus cloud thinning would attempt to reduce the thin, high-altitude cirrus clouds to emit more long-wave radiation from the earth to space.

Space-based technologies would attempt to reflect a small fraction of sunlight away from the earth by positioning sun shields in space.

Lastly, **stratospheric aerosol scattering** would introduce tiny reflective particles, such as sulfate aerosols or perhaps calcium carbonate, into the upper atmosphere, where they could scatter a small fraction of sunlight back into space.



CA17. CBDT notifies Cost Inflation Index for Financial Year 2024-25

News:

Income Tax department notifies cost inflation index for current ~~fiscal~~

The Income Tax Department has notified the Cost Inflation Index (CII) for the fiscal year 2024-25 **to calculate long-term capital gains from the sale of assets.**

The CII reflects economic inflation, with an increase of 15 points from the previous year, aiding taxpayers in adjusting gains for inflation and reducing tax liabilities

Income Tax Department (Ministry of Finance) has notified 'The cost Inflation Index (CII)' for calculating long-term capital gain tax **arising from the sale of immovable properties, securities (shares/bonds), and jewelry).**

For example. If I purchased a house worth Rs. 1 crore in present year and sold it in Rs. 1.1 crore next year and the CII is 10% then I do not need to pay any capital gain tax as the increase in the price of my house is just equivalent to inflation. If there is any additional gain over inflation (CII) then only I need to pay any capital gain tax.

CA18. World Water Forum

The World Water Forum is the largest international gathering in the water sector involving various stakeholders, which has been co-hosted by the **World Water Council and a host city.**



Sign in

**10TH WORLD
WATER FORUM**

May 18-25, 2024 | Bali, Indonesia WATER FOR SHARED PROSPERITY

The Forum is held every three years and has been taking place since 1997.

About World Water Council

The World Water Council is an international multi-stakeholder organization, created in 1996 and based in Marseille, France.

✓ The Council focuses its activities around 3 main areas:



Mobilize political action and hydrodiplomacy

To mobilize political action in order to secure the right to access water and sanitation for all.

To promote hydrodiplomacy to contribute to peace and sustainable development in the world.



Promote water security

To promote concrete answers and field responses to improve knowledge, finances and governance.



Organize the World Water Forum

To catalyze collective action for water and gain concrete results.

The World Water Council has 260 member organizations, which come from 52 countries across 5 continents.

Every three years during its General Assembly, **members of the World Water Council decide on its governance. Each member has one vote** (regardless of their size and college) to elect the Board of Governors. The Board of Governors is the decision-making body of the organization, it reports periodically to its members.

India has never hosted the Forum.

Indian organizations such as International Commission on Irrigation and Drainage and India Water Foundation are part of World Water Council.

CA19. Life-sustaining freshwater first appeared on Earth 4 billion years ago

News:

Science

Life-sustaining freshwater first appeared on Earth 4 billion years ago, finds Nature study

Geologists analysed ancient rock crystals from Australia to find that freshwater appeared on Earth a mere 600 million years after the formation of the planet.

SANDHYA RAMESH 05 June, 2024 05:34 pm IST

How freshwater, which sustains life, came to be on Earth has continued to be a source of mystery, with experts believing so far that it was the result of water-carrying asteroids and comets pummeling (strike repeatedly) Earth more than four billion years ago.

Now, **geologists from Khalifa University in Abu Dhabi, along with other Australian researchers**, have determined that rock crystals from some of the world's oldest rocks in Australia indicate that freshwater had already appeared on Earth around that time.

According to the findings, published in the journal Nature Geoscience earlier this week, **freshwater appeared on Earth almost 600 million years before what the existing theories and data suggest. The findings date the presence of water on Earth to four billion years ago, a mere 600 million years after the planet formed.**

Also learn about evaporation in rocks:

Rocks on Earth contain minerals and salts, which can be studied for their concentrations in the lab. The researchers analysed isotopes of oxygen molecules to understand whether salty water might have evaporated from rocks to rain back down.

When water evaporates from the surface of the ocean or tops of rocks, it leaves behind salt, while simultaneously undergoing molecular makeup changes. The lighter isotope of oxygen called oxygen-16 evaporates quicker than oxygen-18. This oxygen-16-rich water returns in the form of rain, and once again undergoes evaporation, where more oxygen-18 remains behind. Over a period, freshwater becomes concentrated in oxygen-16, while seawater mainly comprises the heavier oxygen-18.

Meanwhile, oxygen-16 water also percolates into rocks when it rains down and reacts chemically with rocks or magma deep underground. This releases oxygen-16 molecules in these structures, providing evidence of freshwater permeation.

CA20. Snow significantly lower than normal in the Hindu Kush Himalaya

News:

What are the findings of the 2024 Hindu Kush Himalayas snow update? | Explained

What does the report by the International Centre for Integrated Mountain Development highlight? How important is snow persistence? How much of a role does climate change play in river basins receiving low levels of snowmelt this year?

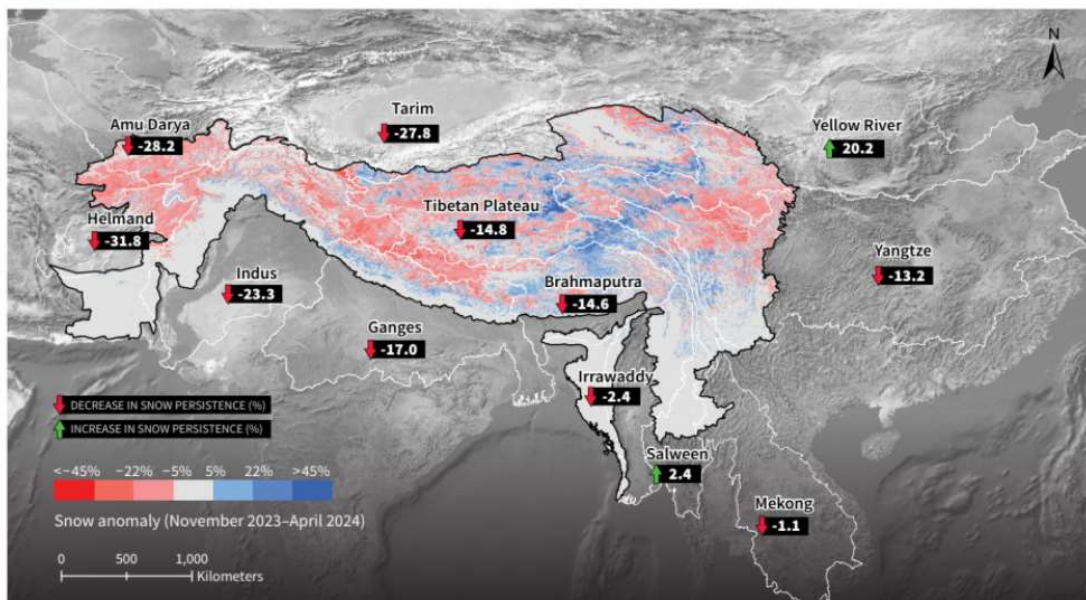
Updated – June 22, 2024 02:09 pm IST Published – June 19, 2024 11:06 pm IST

The report analysed data on snow persistence from 2003 to 2024 and found it to be significantly lower than normal in the Hindu Kush Himalaya (HKH) this year, the **ICIMOD Snow Update Report 2024 stated.**

This is a wake-up call for researchers, policymakers, and downstream communities: lower accumulation of snow and fluctuating levels of snow pose a very serious increased risk of water shortages, particularly this year.

The frozen water in the HKH is a critical source of freshwater for approximately 240 million people living in the region, while also benefiting around 1.65 billion individuals living downstream.

Snowmelt contributes roughly 23 per cent of the total water flow of 12 major river basins that originate high in the HKH.

FIGURE 1: SNOW COVER PERSISTENCE ANOMALY DURING NOV 2023–APRIL 2024 COMPARED TO HISTORIC OBSERVATIONS DURING 2003–2023.

Everywhere it is decreasing:

Basin-scale seasonal snow assessment

In the Amu Darya River basin, the percentage change in seasonal snow persistence previously reached its lowest point in the last twenty-two years in 2018, with a 17.7% reduction. Conversely, in 2008, the changes in snow persistence reached its highest level, peaking at 32.1%, suggesting a significant increase in snowfall during that period. The current year exhibits the lowest snow persistence, with 28.2% below normal. This assessment highlights the dynamic nature of seasonal snow in the region and emphasises the need for continued dissemination of snow information to better understand and manage the impacts of these long-term changes.

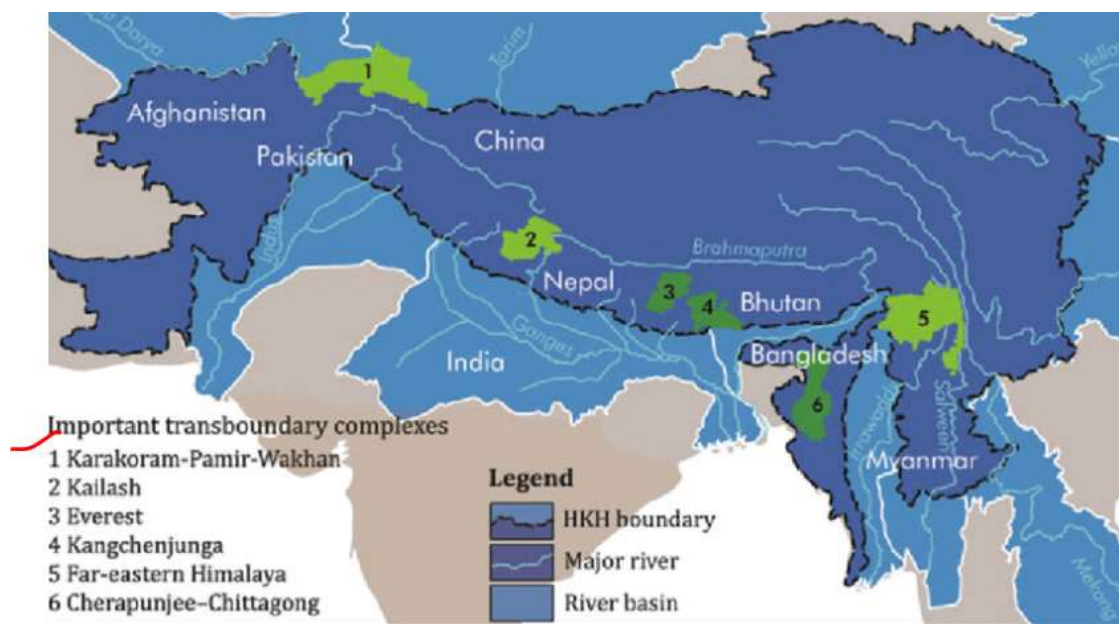
In the Brahmaputra River basin, the year 2021 experienced the lowest seasonal snow persistence, dropped well below average at 15.5%. The highest recorded snow persistence occurred in 2019, reaching 27.1%. This year, the current snow persistence is also notably below normal at 14.6%.

In the Ganges River Basin, there has been significant fluctuations in the past twenty-two years. Prior to 2024, the year 2018 had the lowest snow persistence at 15.2%, while the highest snow persistence of 25.6% was recorded in 2015. The current year has shown the lowest snow persistence, with a value of 17%, which sharply contrasts between the southern and northern sides.

The Helmand River basin experienced a remarkably low snow persistence during the 2018 season, significantly below the average by a margin of 41.9%. However, in stark contrast, the year 2020 showcased the highest snow persistence in the past twenty-two years, surpassing the average by a notable 44%. This year stands as the second lowest in terms of snow persistence, with a decrease of 31.8% below normal levels and some spatial variations on the western side.

In the Indus River basin, there was a notable decrease in seasonal snow persistence in 2018, with a deviation of 9.4% from the average. In contrast, the highest snow persistence above normal was recorded in 2020 with a value of 15.5%. However, this year, there has been a remarkable decrease in snow persistence, falling 23.3% below normal levels with some positive patterns on the southern sides mostly in the lower altitudes.

In the Irrawaddy River basin, the seasonal snow persistence fluctuates every year in the past twenty-two years. The changes remain below 15% except the year 2023 with above normal snow of 19.1%. In 2017, the snow persistence fell below the average by 12.5% which is the lowest in the past twenty-two years. This year's snow persistence is slightly below normal with a value of 2.4% having significant spatial heterogeneity.



CA21. Cascadia Subduction Zone

News:

Washington, Vancouver Island epicentres of future Cascadian earthquakes: Study

Washington, US • Edited By: Heena Sharma • Updated: Jun 08, 2024, 05:01 PM IST



Scientists have mapped one of the most hazardous spots on the globe in unprecedented detail: a 600-mile geologic boundary just off the Pacific Northwest coast.

Along this fraught stretch, called the Cascadia subduction zone, two pieces of the Earth's crust slide against each other, building up stresses capable of unleashing a catastrophic 9.0-magnitude earthquake and generating a tsunami, with waves as high as 40 feet.

What is Cascadia megathrust?

Cascadia megathrust is a major geological feature located off the Pacific Northwest coast of North America. It is a convergent plate boundary, or subduction zone, where the Juan de Fuca Plate is being forced, or subducted, beneath the North American Plate. This tectonic interaction has a potential for large earthquakes and tsunamis.



CA22. Biopharmaceutical Alliance

News:

✓ India, S. Korea, US, Japan, EU launch Biopharmaceutical Alliance

The Biopharmaceutical Alliance was launched in response to the drug supply shortages experienced during the Covid-19 pandemic.

Updated – June 06, 2024 03:57 pm IST Published – June 06, 2024 03:51 pm IST – Singapore

India, South Korea, Japan, the US, and the European Union launched an alliance to put joint efforts to build a resilient supply chain in the biopharmaceutical sector.

The announcement was made at the inaugural meeting of the Biopharmaceutical Alliance, held in **San Diego, California**, during the Bio International Convention 2024, the world's largest biopharmaceutical exhibition.

Three important reasons to launch an alliance:

- ✓ The participants emphasised the importance of a reliable and sustainable supply chain and agreed to coordinate the respective countries' bio policies, regulations, and research and development support measures.
- ✓ They recognised the production of essential raw materials and ingredients is concentrated in a few countries and agreed to work together to build a detailed pharmaceutical supply chain map.
- ✓ The alliance was launched in response to the drug supply shortages experienced during the Covid-19 pandemic.

CA23. Child Nutrition Report 2024: UNICEF

UNICEF has introduced the concept of child food poverty to bring dietary deprivation and poor-quality diets in early childhood to the forefront of global efforts to achieve the nutrition targets of the Sustainable Development Goals.

UNICEF defines child food poverty as children's inability to access and consume a nutritious and diverse diet in early childhood (i.e., the first five years of life).

How UNICEF measures it?

Child food poverty is measured using the UNICEF and World Health Organization (WHO) dietary diversity score. To meet the *minimum dietary diversity* for healthy growth and development, children need to consume foods from **at least five out of the eight** defined food groups.

If children are fed:	0–2 food groups/day they are living in severe child food poverty	3–4 food groups/day they are living in moderate child food poverty	5 or more food groups/day they are not living in child food poverty
			
Breastmilk	Grains, roots, tubers and plantains	Dairy products	Vitamin A-rich fruits and vegetables
			
	Pulses, nuts and seeds	Flesh foods (meat, poultry and fish)	Other fruits and vegetables
			
		Eggs	

Some key findings:

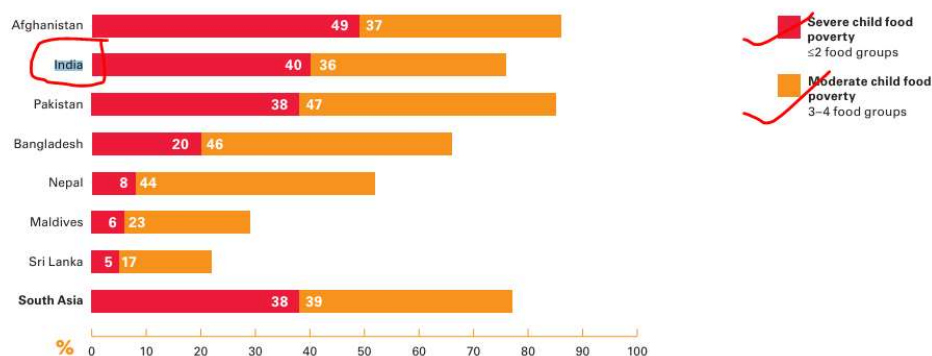
- ✓ Globally, **one in four children (27 per cent) are living in severe child food poverty** in early childhood, amounting to 181 million children under 5 years of age.
- ✓ Globally, **progress towards ending severe child food poverty is too slow**, but some regions and countries are proving that progress is possible and is happening.
- ✓ Severe child food poverty is experienced by children belonging to poor and non-poor households, **indicating that household income is not the only driver of child food poverty**.
- ✓ **Children living in severe child food poverty are missing out on many nutrient-rich foods**, while unhealthy foods are becoming entrenched in their diets.
- ✓ The global food and nutrition crisis and **localized conflicts and climatic shocks are intensifying severe child food poverty**, especially in fragile and humanitarian settings.

What report mentions about India?

✓ Twenty countries account for almost two-thirds (65 per cent) of the total number of children living in severe child food poverty: Afghanistan, Bangladesh, China, Côte d'Ivoire, the Democratic Republic of the Congo, Egypt, Ethiopia, Ghana, **India**, Indonesia, Myanmar, the Niger, Nigeria, Pakistan, the Philippines, Somalia, South Africa, Uganda, the United Republic of Tanzania and Yemen.

Some countries have made better progress in reducing inequities in severe child food poverty than others. Eleven countries successfully narrowed the inequities in severe child food poverty between poorer and wealthier households in the last decade by at least 5 percentage points: Armenia, Burkina Faso, Côte d'Ivoire, the Democratic Republic of the Congo, the Dominican Republic, Guinea, **India**, Lesotho, Liberia, Senegal and Sierra Leone. On the other hand, these disparities

FIGURE A21: Percentage of children living in severe child food poverty and moderate child food poverty, by country and in South Asia, 2016–2022



CA24. What are Large Action Models (LAMs)?

The Large Action Models (LAMs) are advanced artificial intelligence systems that are capable of understanding the human intention and predicting actions.

You must have used tools like ChatGPT, etc., which are the most common examples of Generative AIs and Large Language Models. These tools are fostering innovation in different kinds of tasks like content creation, website designing, and text-to-image / video generation, and the list keeps on growing.

However, **there is one area where all these LLM models lack, and that is taking “ACTIONS” based on the commands given by the user.** These models can provide detailed steps to perform a task but cannot perform the task on your behalf.

What are Large Action Models?

LAMs use agents to perform actions. The agents are software entities capable of independently executing tasks, moving beyond merely responding to human queries and actively contributing to the achievement of specific goals. LAMs integrate the linguistic proficiency of LLMs with the ability to autonomously perform tasks and make decisions, marking a significant shift.

The architecture of Large Action Models is structured based on the simulation of applications and human actions they are intended to replicate.

Unlike a mere textual representation, LAMs can effectively simulate the composition of diverse applications and the corresponding human actions performed on them without the need for a temporary demonstration. This capability is facilitated by advancements in neuro-symbolic programming and pattern recognition.

Applications of LAMs

From tackling simpler tasks like:

- Ordering a Cab
- Ordering Food
- Sending emails
- Scheduling meetings, etc.

To complex tasks like:

- Planning a whole trip abroad, including flight, hotel, and cab bookings, while creating a travel itinerary. This involves various websites and applications.
- On-the-go video/audio translation, etc.

This enough for you. Jada deep main jaayenger, dimagkharab ho jyga.

CA25. About REDD+

Read complete:

REDD+ is a climate change mitigation solution developed by Parties to the United Nations Framework Convention on Climate Change (UNFCCC).

REDD+ goes beyond simply deforestation and forest degradation and includes the role of conservation, sustainable management of forests and enhancement of forest carbon stocks.

The framework is commonly referred to as the Warsaw Framework for REDD+ (WFR) adopted at COP 19 in Warsaw, December 2013 and provides the complete methodological and financing guidance for the implementation of REDD+ activities. REDD+ is also recognized in Article 5 of the Paris Agreement.

How does REDD+ benefit developing countries?

Parties to the United Nations Framework Convention on Climate Change (UNFCCC) have developed a climate change mitigation approach designed to **incentivize developing countries** to reduce carbon emissions from deforestation and forest degradation. **This mitigation approach is known as REDD+.**

REDD+ aims to incentivize developing countries to contribute to climate change mitigation actions in the forest sector by:

- ✓ reducing carbon emissions from deforestation;
- ✓ reducing carbon emissions from forest degradation;
- ✓ conservation of forest carbon stocks;
- ✓ sustainable management of forests; and
- ✓ enhancement of forest carbon stocks.

By implementing REDD+ actions,

- a. countries will contribute to conserving their national biodiversity and to the global fight against climate change.
- b. And they will get incentives also.

What is the difference between REDD+ and the UN-REDD Programme?

REDD+ is a voluntary climate change mitigation approach that has been developed by Parties to the UNFCCC. It aims to incentivize developing countries to reduce emissions from deforestation and forest degradation, conserve forest carbon stocks, sustainably manage forests and enhance forest carbon stocks.

The United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries – or UN-REDD Programme – is a multilateral body. It partners with developing countries to support them in establishing the technical capacities needed to implement REDD+ and meet UNFCCC requirements for REDD+ result-based payments. It does so through a country-based approach that provides advisory and technical support services tailored to national circumstances and needs. The UN-REDD Programme is a collaborative initiative of the United Nations Food and Agriculture Organization (FAO), the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP), and harnesses the technical expertise of these

What are the phases of REDD+?

The UNFCCC defines the three phases of REDD+ as:

Phase 1: Readiness:

Countries design national strategies and action plans with relevant stakeholders, build the capacity to implement REDD+, work on REDD+ related policies and measures, and design demonstration activities.

Phase 2: Demonstration:

National strategies, policies and action plans proposed in Phase I are demonstrated and tested. This may include results-based demonstration activities and may require additional capacity building, technology development and transfer.

Phase 3: Implementation:

Results-based actions are implemented at the national level and results are fully measured, reported and verified. Countries can access results-based payments when they have completed the reporting, assessment and analysis processes under the UNFCCC.

Box 1: International recognition of forests

The world has recognized the importance of the benefits of forests and the dire consequences of their continuing loss. Efforts to reduce emissions from deforestation and forest degradation (REDD+) have been an important part of international climate action for over fifteen years, since the REDD+ mechanism was adopted at UNFCCC COP13. Other international and regional agreements have been made, for example:

- **The New York Declaration on Forests** aimed to halve deforestation by 2020, which was not achieved (Forest Declaration Assessment Partners 2020), and to end forest loss by 2030.^{3,4}
- **The Glasgow Leaders' Declaration on Forests and Land Use** seeks "to halt and reverse forest loss and land degradation by 2030 while delivering sustainable development and promoting an inclusive rural transformation."⁵
- At the **Amazon Summit in August 2023**, the eight Amazon nations, the Democratic Republic of the Congo, Indonesia, the Republic of Congo and Saint Vincent and the Grenadines signed the "United for our Forests" pact, agreeing to do their part in reducing deforestation (Ministério das Relações Exteriores [MRE] 2023).

Recently, the Global Stocktake from the 28th Conference of the Parties (COP28) to the United Nations Framework Convention on Climate Change (UNFCCC 2023) emphasized the importance of enhancing efforts towards the 2030 forest goal, the first time it has appeared in a UNFCCC decision. It is time that this recognition of forests turns into outcomes.

CA26. Forex Reserves Hit All- Time High

News:

India's Forex Reserves Hit All-Time High of \$651.51 Billion

If you see the latest figures:

2. Foreign Exchange Reserves*								
Item	As on May 31, 2024		Variation over					
	₹ Cr.	US\$ Mn.	Week		End-March 2024		Year	
			₹ Cr.	US\$ Mn.	₹ Cr.	US\$ Mn.	₹ Cr.	US\$ Mn.
	1	2	3	4	5	6	7	8
1 Total Reserves	5438138	651510	64340	4837	46882	5091	540849	56443
1.1 Foreign Currency Assets #	4779242	572564	63384	5065	17398	1614	448714	46363
1.2 Gold	471621	56501	342	-212	32302	3826	96695	10944
1.3 SDRs	151235	18118	533	-17	12	-14	1572	-67
1.4 Reserve Position in the IMF	36039	4326	81	1	-2830	-336	-6131	-796

Also, in the above image see the four types of reserves and their contribution.

Forex reserve management:

The RBI, as the custodian of the country's foreign exchange reserves, is vested with the responsibility of managing their investment. The legal provisions governing management of foreign exchange reserves are laid down in the RBI Act 1934 which permits the RBI to invest these reserves in the following types of instruments:

- ✓ Deposits with Bank for International Settlement and other central banks
- ✓ Deposits with foreign commercial banks
- ✓ Debt instruments representing sovereign or sovereign guaranteed liability
- ✓ Other instruments as approved by the Central Board of the RBI

The basic parameters of the RBI's policies for foreign exchange reserves management are **safety, liquidity and returns**.

The RBI has the **primary responsibility of collection, compilation and dissemination of data relating to foreign exchange reserves**. The data are based on actual balances as per RBI records.

The Reserve Bank's reserves management function has in recent years grown both in terms of importance and sophistication for **two main reasons**.

- a. First, the share of foreign currency assets in the balance sheet of the Reserve Bank has substantially increased.
- b. Second, with the increased volatility in exchange and interest rates in the global market, the task of preserving the value of reserves and obtaining a reasonable return on them has become challenging.

Forex Intervention operations of RBI

Foreign exchange intervention can be defined as a transaction by an official agent of the government, to influence the value of the exchange rate. Put simply, it can be defined as the official purchase or sale of foreign assets against domestic assets in the foreign exchange market.

According to Section 40 of the RBI Act, Reserve Bank can buy or sell foreign currency to any authorized person. In addition to US dollar, RBI has the option to use the Euro as an intervention currency. Generally, intervention is used as a tool for regulating the external value of rupee. However, intervention can also be used as a tool of monetary policy because of its impact on liquidity.

When the central bank buys foreign exchange from the market, it infuses an equivalent amount of rupee funds into the system (injection of liquidity); the opposite happens when it sells foreign exchange in the domestic market.

CA27. Panama becomes first nation to evacuate island community over climate impact

News:

CLIMATE CHANGE

Rising tide, shifting lives: Panama becomes first nation to evacuate island community over climate impact

About 300 indigenous Guna families leave home as rising sea levels threaten their existence

The Central American country of Panama has become the first island nation to evacuate its island due to climate change.

Approximately 300 indigenous Guna families residing on Gardi Sugdub, an island in the Caribbean, are being forced to leave their ancestral home as rising sea levels threaten their existence.



Authorities are giving the community keys to new homes on the mainland of CartiSugtupu.



CA28. Giant viruses feeding on algae could slow ice melting

News:

 Giant viruses found on Greenland ice sheet

Date: June 4, 2024

Source: Aarhus University

Summary: Giant viruses found on the Greenland ice sheet probably regulate the growth of snow algae on the ice by infecting them. Knowing how to control these viruses could help us reduce the rate of ice-melt.

Researchers have discovered giant viruses living on algae-blackened ice in the Arctic, which could be harnessed to reduce ice melting.

During spring in the Arctic, the days lengthen, and the sun rises higher in the sky, **bringing life back to the area. This includes algae, which begin to bloom and blacken large areas of the ice.** When the ice blackens, its ability to reflect the sun is limited, accelerating the ice's melting. This increased melting contributes to the worsening of global warming.

To investigate the phenomenon, the researchers used techniques to analyze samples from dark ice, red snow and melting holes (cryoconite). **They found signatures of active giant viruses, which is the first time they've been found on surface ice and snow that contains a high concentration of pigmented microalgae.**

What are these Giant viruses?

Giant viruses are not as scary as they sound – they can grow up to 2.5 micrometers, which, although still not visible by the naked eye, is bigger than most bacteria.

- They also differ from normal viruses because they contain DNA, which they can translate to mRNA.
- It was this mRNA that the researchers looked at to ensure that the giant viruses' DNA didn't come from long-dead microorganisms.
- While DNA from dead viruses can be found in samples, mRNA is broken down much faster, and **is therefore an important marker of viral activity.**
- The researchers found the same markers in the sequenced mRNA as the sequenced DNA, **indicating that the viruses are living and active on the ice.**

CA29. National Health Claims Exchange

News:

 What is the National Health Claim Exchange? | Explained

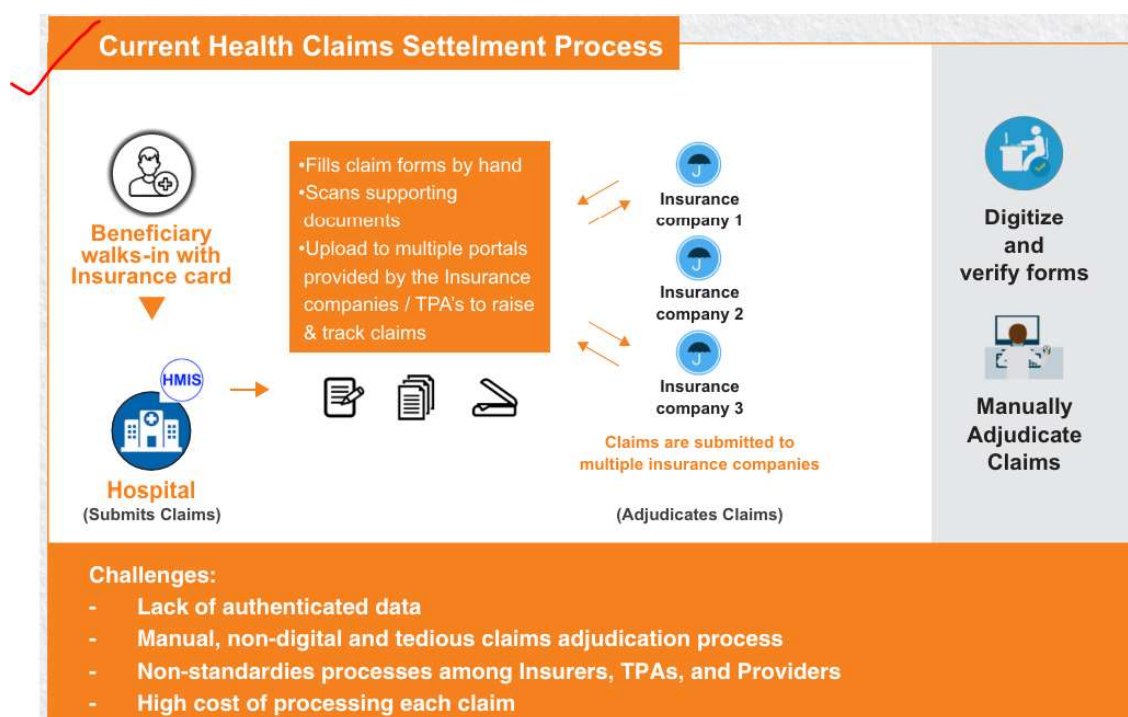
Will the platform help patients access healthcare easily? Will it bring about transparency in the healthcare claims ecosystem? What are the hurdles to the Insurance Regulatory and Development Authority of India's objective of achieving 'Insurance for All by 2047'?

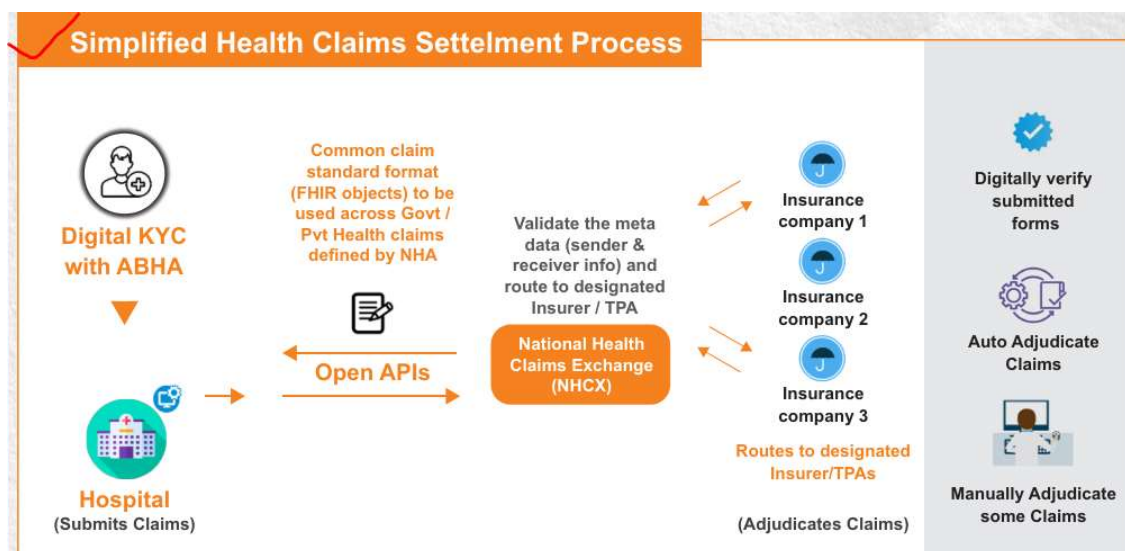
Updated – June 09, 2024 11:03 am IST Published – June 09, 2024 04:39 am IST

A Digital Public Good Created by National Health Authority, Ministry of Health and Family Welfare, Government of India to enable standardized and faster claims processing for better patient experience with reduced operations costs.

NHCX is a communication protocol facilitating the exchange of health claim information between payers, providers, and beneficiaries.

The National Health Claims Exchange works similarly to the internet and email exchange networks in that it enables the transfer of data packets from one point to another (destination). Just as routing switches or email gateways ensure that messages are sent and received with the appropriate levels of consistency, security, privacy, and durability. National Health Claims Exchange serves as a protocol for exchanging claims-related information among various actors, including payers, providers, beneficiaries, regulators, and observers.





Proposed Benefits for Stakeholders

The introduction of NHCX will lead to multiple benefits for the stakeholders and the insurance sector.



BENEFICIARY

- Reduced wait time.
- Faster preauthorization and discharge approvals from insurance companies
- Reduced cost of insurance premiums
- More types of claims coverage in future including, OPD, Pharmacy Bills etc.



PROVIDER

- Single Payer Network
- Universal claims format
- Faster payments by payers
- Improved patient experience
- Better visibility of claims status
- Paperless operations



PAYERS

- Reduction in overhead operational costs
- Enabling new processes/rules for auto adjudication, control fraud and abuse prevention
- Reduction in claims processing cost per each claim
- Paperless operations
- Better quality of data for Industry and regulators

CA30. Global Gender Gap Index 2024

News:

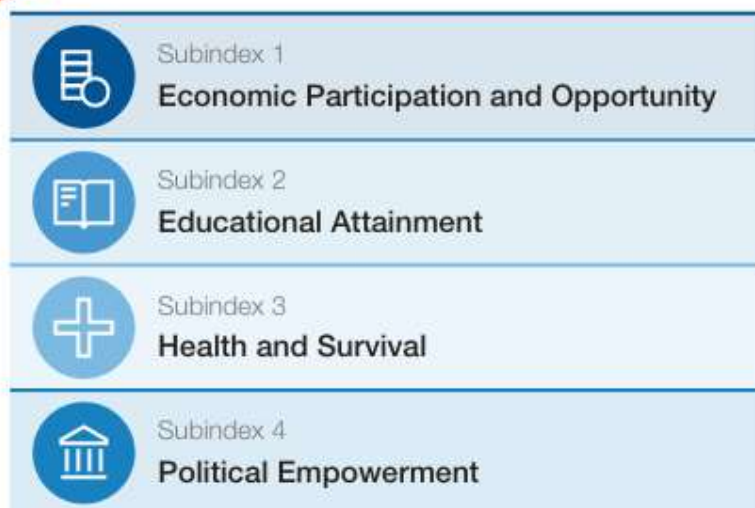
Published: 11 June 2024

Global Gender Gap Report 2024

This year, the 18th edition of the Global Gender Gap Index benchmarks gender parity across 146 economies, providing a basis for the analysis of gender parity developments across two-thirds of the world's economies.

The Global Gender Gap Index was first introduced by the World Economic Forum in 2006 to benchmark progress towards gender parity across four dimensions: economic opportunities, education, health and political leadership (Figure 1.1).

The Global Gender Gap Index Framework



Source

World Economic Forum, Global Gender Gap Index 2024.

The Global Gender Gap Index 2024 rankings:

India has slipped two places on the World Economic Forum's (WEF) Global Gender Gap index to 129th place, while Iceland retained its top position.

Rank	Economy	Score		Score change from	Rank change from
		0-1, 1=parity		2023	2023
1	Iceland	0.935		+0.023	-
2	Finland	0.875		+0.012	+1
3	Norway	0.875		-0.004	-1
4	New Zealand	0.835		-0.021	-
5	Sweden	0.816		+0.001	-
6	Nicaragua	0.811		-	+1
7	Germany	0.810		-0.005	-1
8	Namibia	0.805		+0.003	-
9	Ireland	0.802		+0.007	+2
10	Spain	0.797		+0.007	+8

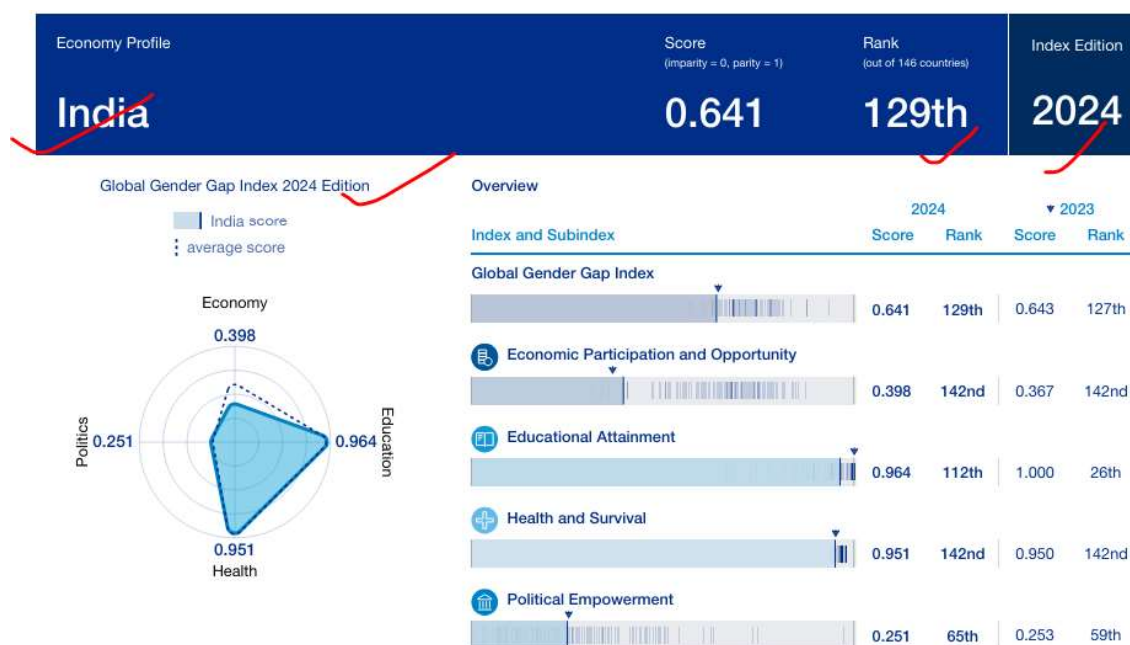
✓ 129	India	0.641		-0.002	-2
130	Qatar	0.640		+0.013	+3
131	Kuwait	0.636		-0.015	-11
132	Maldives	0.633		-0.016	-8

Within South Asia, India was ranked fifth after Bangladesh, Nepal, Sri Lanka and Bhutan.

Southern Asia

Economy	Rank		Score
	Regional	Global	
Bangladesh	1	99	0.689
Nepal	2	117	0.664
Sri Lanka	3	122	0.653
Bhutan	4	124	0.651
India	5	129	0.641
Maldives	6	132	0.633
Pakistan	7	145	0.570

If you want to see India in detail:



CA31. UNESCO launches new initiatives for “greening education” in classrooms

News:

[Press release](#) >

UNESCO launches new initiatives for “greening education” in classrooms

On World Environment Day, UNESCO unveils new tools for greening schools and curricula, highlighting the need to empower young people to play a concrete role in tackling the climate crisis.

Why the need was felt?

A UNESCO analysis of 100 national curriculum frameworks in 2021 revealed that **nearly half (47%) do not mention climate disruption**. Only 23% of teachers felt able to properly address climate action in their classrooms and 70% of young people surveyed could not explain climate disruption, and expressed concerns about the way in which it is currently taught.

To this end, today UNESCO is promoting two concrete tools for its Member States and educational communities around the world:

1. UNESCO's new Greening Curriculum Guidance is a practical manual providing, for the first time, a common understanding of what climate education should consist of and how countries can mainstream environmental topics across curricula, with detailed expected learning outcomes according to age group (from 5-year-olds to 18+). It focuses on the importance of promoting active learning and designing a range of hands-on activities.

2. UNESCO's new Green School Quality Standard, developed in partnership with other UN agencies, civil society and countries, sets the minimum requirements on how to create a "green school" by promoting an action-oriented approach. It recommends that all schools set up green governance committees including students, teachers and parents to oversee sustainable management. It also

CA32. Agnipath Yojana

Read carefully all the points:

- The Union Cabinet had approved the scheme for Indian youth to serve in the Armed Forces on 14 Jun 2022.
- The 'Agnipath' scheme is a transformational reform for the Armed Forces and the Nation and aims to bring paradigm changes in the Human Resource Management of the Indian Army.
- The youth (male/female) selected under this scheme will be known as 'Agniveers'
- The 'Agnipath' allows patriotic and motivated youth (17.5 years to 21 years old) to serve in the Armed Forces for a period of 4 years.
- The best among to Agniveers, up to 25 percent in each batch, will be selected for regular cadre to serve for another 15 years, based on transparent and merit-based assessment.
- ✗ 46,000 Agniveers will be recruited this year (2022).
- ✗ The process of recruiting 46,000 soldiers, sailors, and airmen this year will begin on a "all-India, all-class" basis under the Agnipath scheme.
- The average age in the forces is 32 years today, which will go down to 26 in six to seven years.
- A youthful profile of the Army will provide a fresh lease of 'Josh and Jazba' while bringing about a transformational shift towards a more technical savvy Armed Forces- which is the need of the hour.
- Army will continue to retain its rich legacy, history, traditions, military values and culture - based on the principles of **Cohesiveness, Camaraderie, Esprit-de-Corps** and the core ethos of **Naam, Namak and Nishan**
- On completion of the engagement period of four years, Agniveers will be paid one time 'Seva Nidhi' package which shall comprise their contribution including accrued interest thereon and matching contribution from the Government equal to the accumulated amount of their contribution including interest.
- After their tenure their skills and experience would create opportunities for themselves and Contribute to the growth of the economy

Details of monthly remuneration, Agniveer Corpus Fund and one-time **Seva Nidhi** package are indicated below:-

Year	Customised Package(Monthly)	In Hand (70%)	Contribution to Agniveers Corpus Fund (30%)	Contribution to Corpus fund by GoI
All Figures in Rs.(Monthly Contribution)				
1 st Year	30000	21000	9000	9000
2 nd Year	33000	23100	9900	9900
3 rd Year	36500	25550	10950	10950
4 th Year	40000	28000	12000	12000
All Figures in Rs. (Monthly Contribution)				
Total Contribution in Agniveers Corpus Fund after four years			Rs.5.02 lakh	Rs.5.02lakh
Exit after 4 year		Rs.10.04 Lakhs as Seva Nidhi Package (absolute amount excluding interest)		

Life Insurance Cover: *Agniveers* will be provided life insurance cover of Rs. 48 lakhs for the duration of their engagement period as *Agniveers* in the defence forces.

Compensation for Death: In case of death, the following will be admissible to next of Kin (NOK) from the Agniveer Corpus Fund: -

- (i) Insurance cover as applicable
- (ii) All other compensation.

CA33. Learn complete about Speaker and its powers.

The Speaker has a key role in parliamentary democracy. The Constitution of India provides for the offices of the Speaker and Deputy Speaker who, according to Article 93, are to be elected “**as soon as may be**” after the commencement of the House.

93. The Speaker and Deputy Speaker of the House of the People.—

The House of the People shall, **as soon as may be**, choose two members of the House to be respectively Speaker and Deputy Speaker thereof and, so often as the office of Speaker or Deputy Speaker becomes vacant, the House shall choose another member to be Speaker or Deputy Speaker, as the case may be.

Resignation and removal of Speaker:

✓ **94. Vacation and resignation of, and removal from, the offices of Speaker and Deputy Speaker.**— A member holding office as Speaker or Deputy Speaker of the House of the People—

(a) shall vacate his office if he ceases to be a member of the House of the People;

(b) may at any time, by writing under his hand addressed, if such member is the Speaker, to the Deputy Speaker, and if such member is the Deputy Speaker, to the Speaker, resign his office; and

(c) may be removed from his office by a resolution of the House of the People passed by a majority of all the then members of the House:

Provided that no resolution for the purpose of clause (c) shall be moved unless at least fourteen days' notice has been given of the intention to move the resolution:

Provided further that, whenever the House of the People is dissolved, the Speaker shall not vacate his office until immediately before the first meeting of the House of the People after the dissolution.

There is a difference in explanation who presides Speaker's role when Speakers seat is vacant and when Speaker is absent.

95. Power of the Deputy Speaker or other person to perform the duties of the office of, or to act as, Speaker.—(1) While the office of Speaker is vacant, the duties of the office shall be performed by the Deputy Speaker or, if the office of Deputy Speaker is also vacant, by such member of the House of the People as the President may appoint for the purpose.

(2) During the absence of the Speaker from any sitting of the House of the People the Deputy Speaker or, if he is also absent, such person as may be determined by the rules of procedure of the House, or, if no such person is present, such other person as may be determined by the House, shall act as Speaker.

There are no specific qualifications for becoming Speaker, which means any member is entitled to be considered.

The Speaker not to preside while a resolution for his removal from office is under consideration.

96. The Speaker or the Deputy Speaker not to preside while a resolution for his removal from office is under consideration.—(1) At any sitting of the House of the People, while any resolution for the removal of the Speaker from his office is under consideration, the Speaker, or while any resolution for the removal of the Deputy Speaker from his office is under consideration, the Deputy Speaker, shall not, though he is present, preside, and

The Chairman or Speaker, or person acting as such, shall not vote in the first instance, but shall have and exercise a casting vote in the case of an equality of votes.

100. Voting in Houses, power of Houses to act notwithstanding vacancies and quorum.—(1) Save as otherwise provided in this Constitution, all questions at any sitting of either House or joint sitting of the Houses shall be determined by a majority of votes of the members present and voting, other than the Speaker or person acting as Chairman or Speaker.

The Chairman or Speaker, or person acting as such, shall not vote in the first instance, but shall have and exercise a casting vote in the case of an equality of votes.

If at any time during a meeting of a House there is no quorum, it shall be the duty of the Chairman or Speaker, or person acting as such, either to adjourn the House or to suspend the meeting until there is a quorum.

(4) If at any time during a meeting of a House there is no quorum, it shall be the duty of the Chairman or Speaker, or person acting as such, either to adjourn the House or to suspend the meeting until there is a quorum.]

If any question arises whether a Bill is a Money Bill or not, the decision of the Speaker of the House of the People thereon shall be final.

(3) If any question arises whether a Bill is a Money Bill or not, the decision of the Speaker of the House of the People thereon shall be final.

(4) There shall be endorsed on every Money Bill when it is transmitted to the Council of States under article 109, and when it is presented to the President for assent under article 111, the certificate of the Speaker of the House of the People signed by him that it is a Money Bill.

The salary of the Speaker is drawn from the Consolidated Fund of India.

(3) The following expenditure shall be expenditure charged on the Consolidated Fund of India—

(a) the emoluments and allowances of the President and other expenditure relating to his office;

(b) the salaries and allowances of the Chairman and the Deputy Chairman of the Council of States and the Speaker and the Deputy Speaker of the House of the People;

At a joint sitting of the two Houses the Speaker of the House of the People presides the first (Article 118 (4)).

(4) At a joint sitting of the two Houses the Speaker of the House of the People, or in his absence such person as may be determined by rules of procedure made under clause (3), shall preside.

Powers of the Speaker:**CONDUCTING THE HOUSE:**

The conduct of government business of the House is decided by the Speaker in consultation with the Leader of the House. Prior permission of the Speaker is required for members to ask a question, or to discuss any matter.

There are Rules and Procedure for the functioning of the House, but the Speaker has vast powers in ensuring these Rules are followed, and in choosing procedures. This makes the impartiality of the Speaker a crucial check and balance for the Opposition to have its say in the House.

QUESTIONS & RECORDS:

The Speaker decides the admissibility of a question raised by a member, as well as how the proceedings of the House are published. The Speaker has the power to expunge, in full or in part, remarks that she may consider to be unparliamentary. Critical remarks against the ruling party may not be published if the Speaker decides to expunge them.

VOICE VOTES, DIVISION:

When the treasury benches seem thin in the House, the Speaker can disregard a request for division and push a Bill through by voice vote.

As per the Rules of Procedure and Conduct of Business in Lok Sabha, if the Speaker is of the opinion that is “unnecessarily claimed”, simply ask the members who are for ‘Aye’ and those for ‘No’ respectively to rise in their places and decide.

In such a case, the names of the voters shall not be recorded. Vote by division is important as a record for posterity. An MP gets a chance to record dissent and show the mandate of her constituents.

NO-CONFIDENCE MOTION:

One of the most important times when a speaker’s impartiality impacts the Opposition is when a motion of no-confidence is moved against the government. In 2018, when the YSRCP and TDP gave notices for a motion of no-confidence, then Speaker Sumitra Mahajan adjourned the House several times before admitting the motion and putting it to vote.

CASTING VOTE:

Although it is rare that a speaker is required to give her casting vote, it is a crucial function. According to Article 100 of the Constitution, which talks about voting in the Houses, the Chairman of Rajya Sabha or Speaker of Lok Sabha, or any person acting as such, “shall not vote in the first instance, but shall have an exercise a casting vote in the case of any equality of votes”.

Conventionally, the Speaker votes in favour of the government.

Disqualification of members

For the Opposition, the realities of the power of the Speaker under the Tenth Schedule of the Constitution are perhaps more significant than how the House is conducted.

The Tenth Schedule or the anti-defection law, introduced to the Constitution through the Fifty-Second (Amendment) Act, 1985, **gives the Speaker of the House the power to disqualify legislators**

who 'defect' from a party. In the landmark case *Kihoto Hollohan versus Zachillhu* in 1992, the **Supreme Court upheld the power vested in the Speaker** and said that only the final order of the Speaker will be subject to judicial review.

CA34. IIT-Madras- NASA jointly study multidrug-resistant pathogens on International Space Station

News:



Researchers from the Indian Institute of Technology-Madras and NASA's Jet Propulsion Laboratory (JPL) are studying multidrug-resistant pathogens on the International Space Station (ISS).

The findings could help inform and ensure the health of astronauts.

A study of the microbial landscape on the ISS is crucial to the health of astronauts who are deeply influenced by microorganisms on board the station which has limited access to medical facilities.

The researchers studied the genomic, functional, and metabolic enhancement in multidrug resistant pathogens, focussing on *Enterobacter bugandensis* – a nosocomial pathogen (originated in a hospital) — and 13 strains of the bacterium were isolated from the ISS.

CA35. PM-KISAN SCHEME

News:

Centre Releases 17th Instalment Of PM-Kisan Samman Nidhi Worth Rs 20,000 Crore for Farmers.



PM-KISAN SCHEME

- ✓ PM Kisan is a Central Sector scheme with 100% funding from Government of India.
- ✓ It has become operational from 1.12.2018.
- ✓ Under the scheme an income support of 6,000/- per year in three equal installments will be provided to all land holding farmer families.
- ✓ Definition of family for the scheme is husband, wife and minor children.
- ✓ State Government and UT administration will identify the farmer families which are eligible for support as per scheme guidelines.
- ✓ The fund will be directly transferred to the bank accounts of the beneficiaries.
- ✓ There are various Exclusion Categories for the scheme.

The following categories of beneficiaries of higher economic status shall not be eligible for benefit under the scheme.

1. All Institutional Land holders.
2. **Farmer families which belong to one or more of the following categories:**
 - a. Former and present holders of constitutional posts
 - b. Former and present Ministers/ State Ministers and former/present Members of Lok Sabha/ Rajya Sabha/ State Legislative Assemblies/ State Legislative Councils, former and present Mayors of Municipal Corporations, former and present Chairpersons of District Panchayats.
 - c. All serving or retired officers and employees of Central/ State Government Ministries /Offices/Departments and its field units Central or State PSEs and Attached offices /Autonomous Institutions under Government as well as regular employees of the Local Bodies
 - d. All Persons who paid Income Tax in last assessment year
 - e. Professionals like Doctors, Engineers, Lawyers, Chartered Accountants, and Architects registered with Professional bodies and carrying out profession by undertaking practices.

CA36. Sea Cucumbers

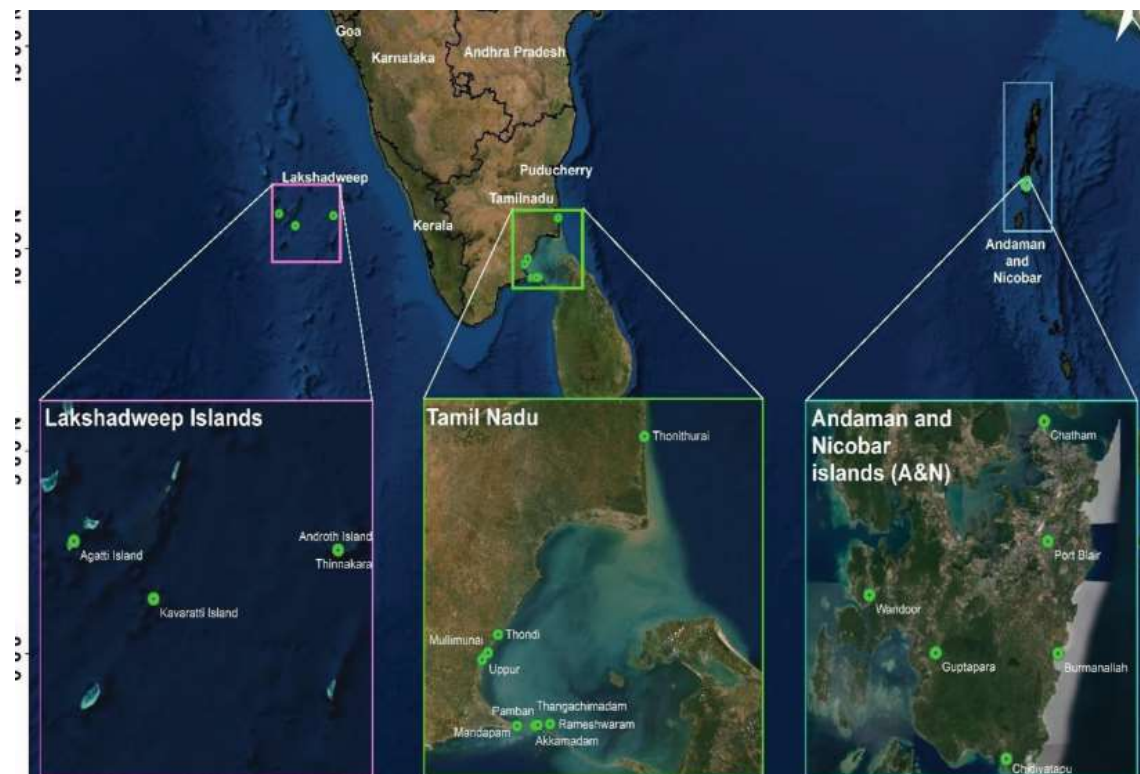
News: Researchers have discovered the pivotal role that sea cucumbers play in maintaining the health of the world's reefs.

About Sea cucumbers:

Sea cucumbers belong to **Class Holothuroidea of Phylum Echinodermata**. These marine animals, **benthic** in nature, are distributed across the seas in the tropics.

In India, there are approximately 200 species reported from the shallow waters dwelling in habitats such as seagrass meadows, coral reefs, rocky shores, sandy shores, and mudflats.

Within India, sea cucumbers have been reported from the **Union Territory of Andaman and Nicobar and Lakshadweep; Gulf of Mannar, Palk Bay, and Ennore in Tamil Nadu; Gulf of Kutch in Gujarat; Malvan coast in Maharashtra; and Kakinada Bay in Andhra Pradesh.**



PROTECTION STATUS

All sea cucumber species have been accorded the highest level of protection under the laws in India.

WILDLIFE (PROTECTION) ACT OF INDIA, 1972:

All species are listed in Schedule I of the Act making their extraction, trade, or any other form of utilisation a punishable offence.

CITES: Two species of sea cucumber found in Indian waters - *Holothuria fuscogilva* and *H. nobilis* are listed in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) since 2020, which regulates their international trade.

Despite the strict legal provisions, the Holothurian populations in India are under stress due to illegal and unsustainable harvests driven by persisting demand in Asian markets, ease of extraction and low processing (drying) costs. These factors are proving detrimental to the persistence of the species and its survival in the coastal waters of India (Asha *et al.*, 2015). In

ECOLOGICAL ROLE

Sea cucumbers play a crucial role in the maintenance of marine ecosystems. They consume decomposing organic matter converting it into recyclable nutrients, which are then available for other marine species (Purcell *et al.*, 2016). Due to the removal and subsequent conversion of organic matter, the oxygen conditions within the sediments stay relatively stable, thus ameliorating some of the adverse effects of organic matter enrichment in coastal ecosystems (MacTavish *et al.*, 2012). This creates an environment and habitat suitable for other marine life forms. Sea cucumbers form an essential part of the

biomass in the ecosystem. In addition, feeding and excretion by sea cucumbers increase seawater's alkalinity, buffering the ocean's acidification.

When they are present in high densities in close proximities to corals, they contribute tangibly to the resilience of coral reefs (Purcell *et al.*, 2016).

CA37. Technical textiles

News: Ministry of Textiles approved Startups in Technical Textiles to boost innovation and sustainability and to foster transformative developments that will shape the industry's future.

Strategic Funding under NTTM to promote High Performance Textiles Solutions

IIT Guwahati to introduce Geotextiles in Civil Engineering Curriculum with support from NTTM

Posted On: 13 JUN 2024 4:58PM by PIB Delhi

Technical textiles are defined as textile materials and products **used primarily for their technical performance and functional properties** rather than their aesthetic or decorative characteristics.

Other terms used for defining technical textiles include industrial textiles, functional textiles, performance textiles, engineering textiles, invisible textiles, and hi-tech textiles.

Technical textiles are used individually or as a component/part of another product.

- a. Technical textiles are used individually to satisfy specific functions such as fire-retardant fabric for uniforms of firemen and coated fabric to be used as awnings.
- b. As a component or part of another product, they are used to enhance the strength, performance or other functional properties of that product.

Technical textiles have been slowly but steadily gaining ground due to one or more of the reasons such as: **functional requirement, health & safety; cost effectiveness; durability; high strength; light weight; versatility; customization; user friendliness; eco friendliness; logistical convenience etc.**

Unlike conventional textiles used traditionally for clothing or furnishing, technical textiles are used basically on account of their specific physical and functional properties and mostly by other user industries.

With a view to position the country as a global leader in Technical Textiles, National Technical Textiles Mission (NTTM) has been approved with a four-year implementation period from FY 2020-21 to 2023-24.

✓ The Mission will have four components:

- **Component -I (Research, Innovation and Development)** - The fundamental research activities will be based on 'pooled resource' method and will be conducted in various Centre for Scientific & Industrial Research (CSIR) laboratories, Indian Institute of Technology (IIT) and other scientific/ industrial/ academic laboratories of repute. Application based research will be conducted in CSIR, IIT, Research Design & Standards Organization (RDSO) of Indian Railways, Indian Council of Agricultural Research (ICAR), Defense Research & Development Organization (DRDO), National Aeronautical Laboratory (NAL), Indian Road Research Institute (IRRI) and other such reputed laboratories, as approved by the Mission Steering Group.
- **Component -II (Promotion and Market Development)** - The penetration level of technical textiles is low in India. The Mission will aim at increasing average growth rate through market development, market promotion, international technical collaborations, investment promotions and 'Make in India' initiatives.
- **Component -III (Export Promotion)** - The component aims at export promotion of technical textiles. An Export Promotion Council for Technical Textiles will be set up for effective coordination and promotion activities in the segment.
- **Component -IV (Education, Training, Skill Development)** - Education, skill development and adequacy of human resources in the country is not adequate to meet the technologically challenging and fast-growing technical textiles segment. The Mission will promote technical education at higher engineering and technology levels related to technical textiles and its application areas covering engineering, medical, agriculture, aquaculture, and dairy segments. Skill development will be promoted, and adequate pool of highly skilled manpower resources will be created for meeting the need of relatively sophisticated technical textiles manufacturing units.

CA38. Complete detail about G-7

The G7 Summit is being held in Borgo Egnazia in Apulia, Italy on June 13-15, 2024. The one to be held in Apulia will be the seventh Summit of the G7 hosted in Italy.



About the G7

The Group of Seven (G7) is an informal forum that brings together Italy, Canada, France, Germany, Japan, the United Kingdom, and the United States of America.

The European Union also participates in the Group and is represented at the summits by the President of the European Council and the President of the European Commission.

Historical Background is important:

✓ Historical background

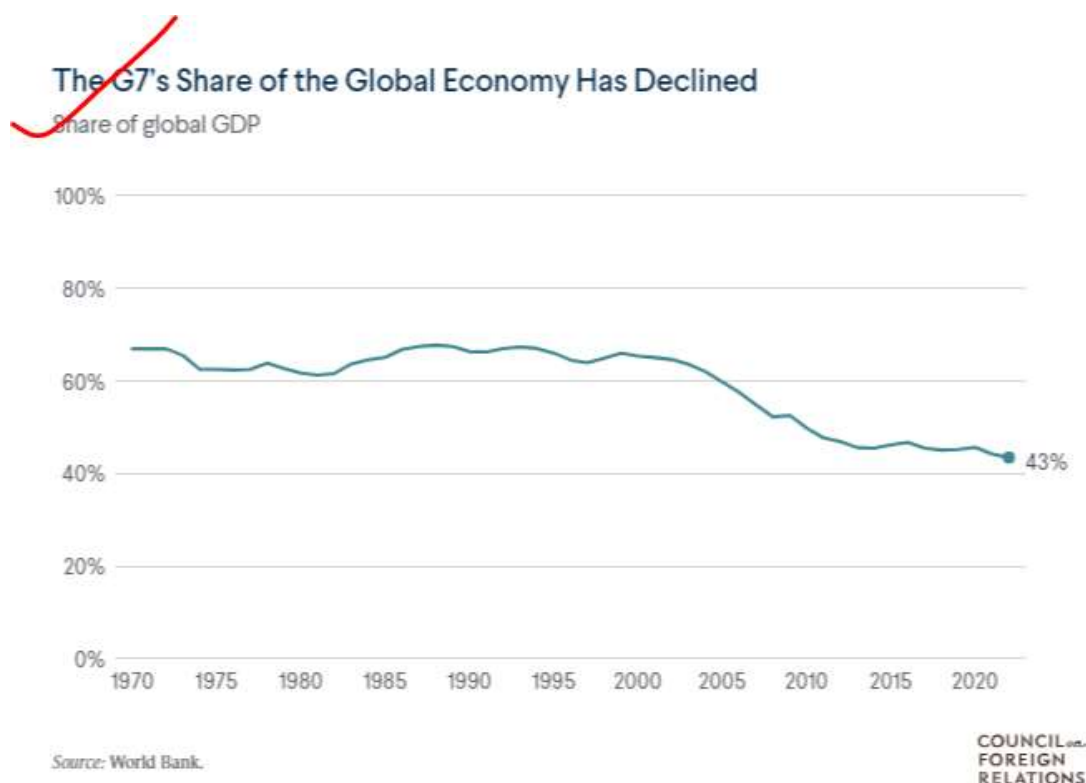
The Group was established as a platform for economic and financial cooperation in response to the 1973 energy crisis. The first Summit of Heads of State and Government was held in 1975 in Rambouillet, France. It included France, the United States of America, the United Kingdom, Germany, Japan, and Italy. In 1976, with the admission of Canada, the G7 took its current configuration. Since 1977, representatives of the European Economic Community, now the European Union, also participate in the work of the Group. The EU does not hold the rotating presidency of the G7.

The G7 expanded into the G8 between 1997 and 2013, with the inclusion of Russia. However, Russia's participation was suspended in 2014 following the illegal annexation of Crimea.

✓ How the G7 process works

Compared to an international organization, the G7 does not have a permanent administrative structure. Each year, starting from the 1st of January, one of the Member States takes over the leadership of the Group on a rotating basis. The Nation holding the Presidency serves as a temporary secretariat and hosts the Group work and the Leaders' Summit. Most importantly, the Presidency plays a key role in setting the agenda and identifying key priorities. On January 1, 2024, Italy assumed the Presidency for the seventh time in its history, succeeding Japan, and will hand it over to Canada on December 31, 2024.

Few more facts about G-7:



At these summits the G-7 Group of 7, seven major industrial countries heads of state and government discuss key global policy issues, exchange views and work together to develop constructive solutions.

CA39. India is world's second largest emitter of nitrous oxide

News:

India is world's second largest emitter of nitrous oxide

TH PREMIUM

Nitrous oxide emissions largely come from nitrogen fertilizer usage and from animal manure; though its current levels are a thousand times less than carbon dioxide, it lasts much longer and is rising rapidly

Updated – June 13, 2024 09:05 am IST Published – June 12, 2024 11:22 pm IST – NEW DELHI

India is the **world's second largest source of nitrous oxide (N₂O)**, a greenhouse gas that heats up the atmosphere far more than carbon dioxide.

Nearly 11% of such global man-made emissions in 2020 were from India, **topped only by China at 16%.**

The major source of these emissions comes from fertilizer usage, according to a global assessment of N₂O emissions published in the journal Earth System Science Data published recently.

The current level of carbon dioxide in the atmosphere is a thousand times more than that of nitrous oxide, making carbon dioxide reduction the bigger priority among countries trying to contain climate change. **However, because nitrous oxide stays longer in the atmosphere** and is rising rapidly, scientists in recent years have been warning that it must also be tackled with a greater sense of urgency.

Agricultural production using nitrogen fertilizers, such as ammonia, and animal manure contributed 74% of the total anthropogenic N₂O emissions in the last decade. N₂O emissions from human activities are responsible for 6.4% of the effective radiative forcing of greenhouse gases, and have added about 0.1°C to current global warming.

The top five country emitters by volume of anthropogenic N₂O emissions in 2020 were China (16.7%), India (10.9%), the United States (5.7%), Brazil (5.3%), and Russia (4.6%).

Other factors which led to increase concentration:

Long-term impact

Once emitted, N₂O stays in the atmosphere for longer than the average human lifespan (117 years), and therefore its climate and ozone impacts are long-lived.

- In addition to N₂O emissions, the inefficient use of synthetic nitrogen fertilizers and animal manure also leads to the pollution of groundwater, drinking water, and inland and coastal waters.
- The growing demand for meat and dairy products has also contributed to an increase in emissions through the increase in manure production, which also causes N₂O emissions.
- Increased nitrogen fertilizers used in the production of animal feed have also contributed to the increase.

CA40. 2025 to be International Year of Quantum Science and Tech

News:

2025 to be International Year of Quantum Science and Tech, UN says

Next year will be a century since Werner Heisenberg published a paper in which he laid the foundation of modern quantum mechanics

Updated – June 11, 2024 04:53 pm IST Published – June 11, 2024 04:52 pm IST

On June 7, 2024, the United Nations proclaimed 2025 as the International Year of Quantum Science and Technology (IYQ). According to the proclamation, *this year-long, worldwide initiative will "be observed through activities at all levels aimed at increasing public awareness of the importance of quantum science and applications."*

The International Year of Quantum Science and Technology is a global initiative that aims to strengthen national capacities in the basic sciences and science education.

This initiative will highlight the contribution of quantum science to our increased knowledge and understanding of the physical universe, as well as the critical role of quantum science and technology in developing sustainable solutions in energy, education, communications, and human health.



The proposal for an International Year of Quantum Science and Technology has been endorsed by leading international scientific societies, academies, and unions throughout the world INCLUDING:

Indian Association of Physics Teachers
(IAPT)

Indian Physics Association
(IPA)

In India, National Quantum Mission (NQM):

The Union Cabinet, approved the National Quantum Mission (NQM) on 19th April 2023 at a total cost of Rs.6003.65 crore from 2023-24 to 2030-31, aiming to seed, nurture and scale up scientific and industrial R&D and create a vibrant & innovative ecosystem in Quantum Technology (QT).

Mission Implementation includes setting up of four Thematic Hubs (T-Hubs) in top academic and National R&D institutes in the domains:

1. Quantum Computing
2. Quantum Communication
3. Quantum Sensing & Metrology
4. Quantum Materials & Devices

CA41. 2024 Environmental Performance Index

News:

India at 176 among 180 countries in Environment Performance Index 2024, high emissions flagged again

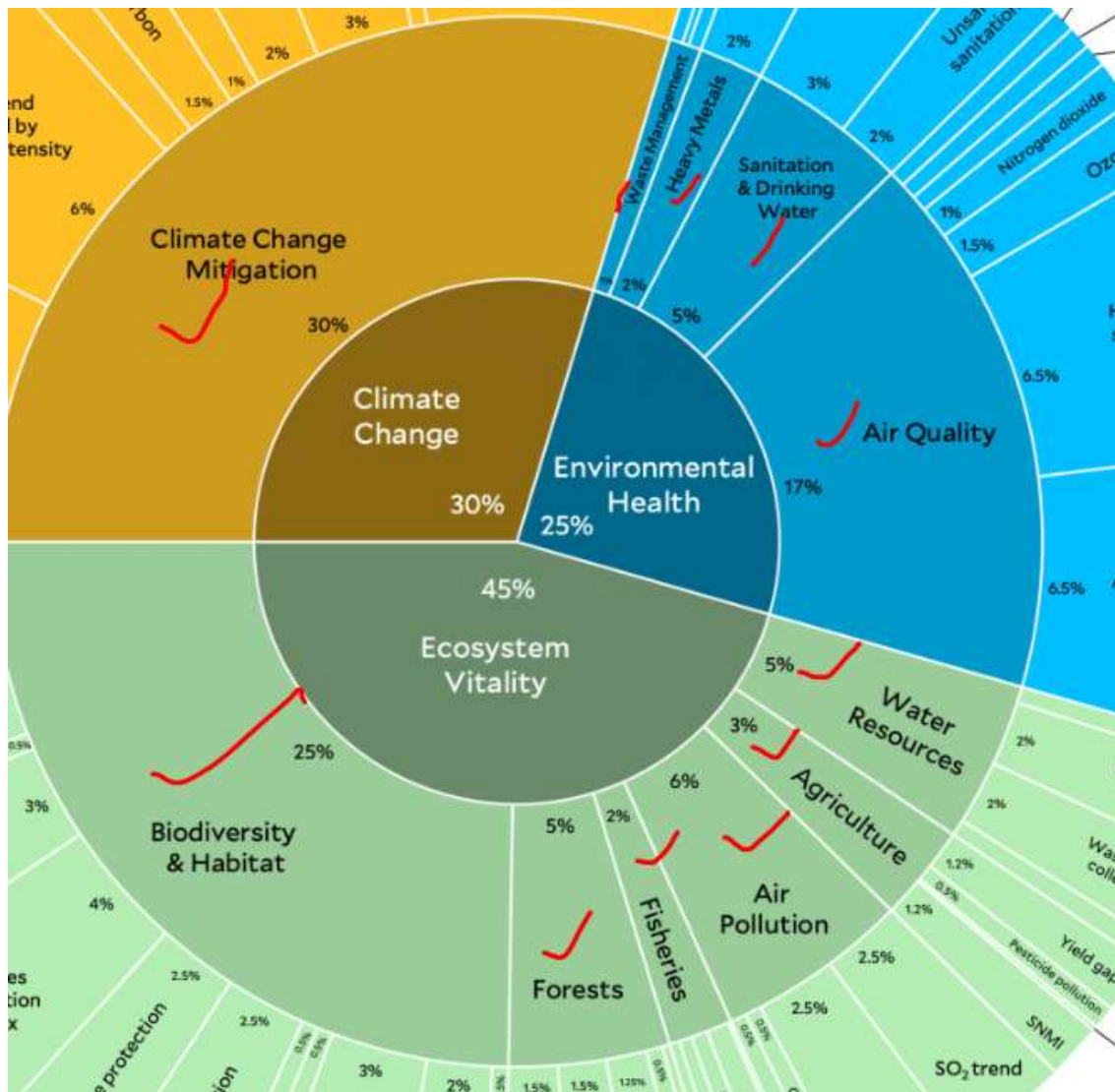
EPI 2022, which placed India at bottom, was rejected by the Centre. Bad air quality, high projected emissions & low biodiversity-habitat scores behind poor rank this year.

AKANKSHA MISHRA 12 June, 2024 07:17 pm IST

The EPI is released once every two years to assess the performance of countries in achieving the targets of the UN Sustainable Development Goals, Paris Agreement 2015, and most recently, the Kunming-Montreal Global Biodiversity Framework 2022 — key climate change mitigation measures globally.

The 2024 EPI combines 58 indicators across 11 issue categories, ranging from climate change mitigation and air pollution to waste management, sustainability of fisheries and agriculture, deforestation, and biodiversity protection.

See 11 categories:



Top 5 countries and India's ranking:

COUNTRY	RANK	SCORE
<u>Estonia</u>	1	75.3
Luxembourg	2	75.0
Germany	3	74.6
Finland	4	73.7
United Kingdom	5	72.7
India	176	27.6

India, the third largest emitter of greenhouse gases, was placed among the lowest-rung countries in air quality, projected emissions, and biodiversity and habitat in the 2024 Environment Performance Index (EPI).

Not the first time

This is not the first time that India has scored low on the Environment Performance Index, which has been producing reports since 2002. The last EPI in 2022 ranked India at the bottom because of low scores in nearly the same indicators.

YEAR	RANKS
2024	176 out of 180
2022	180 out of 180
2020	170 out of 180
2018	177 out of 180
2016	141 out of 180
2014	155 out of 180
2012	125 out of 132
2010	123 out of 163
2008	100 out of 140

Published by:

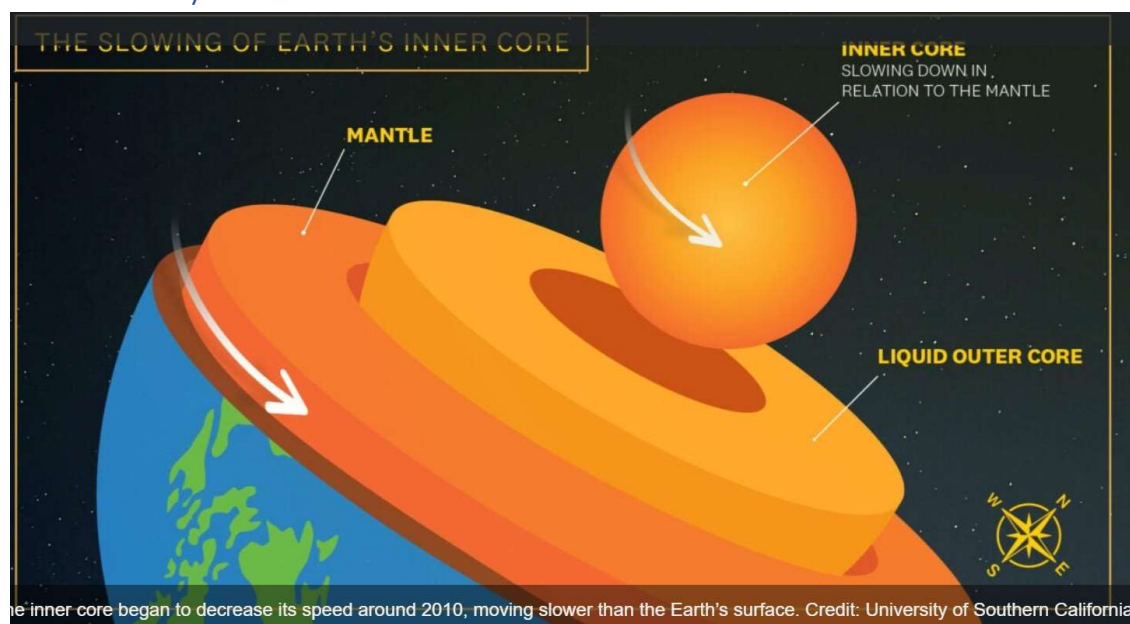
~~Yale Center for Environmental Law & Policy~~

~~Center for International Earth Science Information~~

~~Network Earth Institute, Columbia University~~

~~With support from The McCall MacBain Foundation~~

CA42. Study confirms the rotation of Earth's inner core has slowed



University of Southern California scientists have proven that the Earth's inner core is backtracking—slowing down—in relation to the planet's surface, as shown in new research published in *Nature*.

The inner core is considered to be reversing and backtracking relative to the planet's surface due to moving slightly slower instead of faster than the Earth's mantle for the first time in approximately 40 years. Relative to its speed in previous decades, the inner core is slowing down.

The inner core is a solid iron-nickel sphere surrounded by the liquid iron-nickel outer core. Roughly the size of the moon, the inner core sits more than 3,000 miles under our feet and presents a challenge to researchers: It can't be visited or viewed.

CA43. Sagar Wildlife Sanctuary has been identified as the second potential habitat for cheetah reintroduction

News:

How the Gandhi Sagar Wildlife Sanctuary is being developed as India's second home for cheetahs

The Gandhi Sagar Wildlife Sanctuary in western Madhya Pradesh is set to become the second home for cheetahs in India, after the Kuno National Park. It has been described as "perfect" cheetah habitat, but introducing the feline predator will come with its challenges.

The Madhya Pradesh government has completed preparations at the Gandhi Sagar Wildlife Sanctuary to become a new habitat for cheetahs.

The Gandhi Sagar Wildlife Sanctuary will be the second home for cheetahs in India, after the Kuno National Park.

What makes Gandhi Sagar an ideal habitat for cheetahs?

The sanctuary is spread across an area of 368.62 sq km, in the districts of Mandsaur (187.12 sq km) and Neemuch (181.5 sq km) in western MP, **right on the border with Rajasthan**.



It sits atop a flat rocky plateau, with the Chambal River cutting the sanctuary into two almost equal halves. The Gandhi Sagar dam, constructed on the river in 1960, lies within the area of the sanctuary, and so does parts of its reservoir, 726 sq km large in area and third largest in the country.

Due to the rocky terrain and exposed sheetrock, the topsoil is shallow. This is behind Gandhi Sagar's savanna ecosystem comprising open grasslands interspersed with dry deciduous trees and shrubs. The riverine valleys, however, are evergreen.

MP's wildlife officials say that Gandhi Sagar makes for "perfect" cheetah habitat.

Under the ambitious cheetah reintroduction project, eight Namibian cheetahs, five females and three males, were released into enclosures at Kuno National Park (KNP) in Madhya Pradesh's Sheopur district **on 17th September, 2022**.

In February 2023, 12 more cheetahs were brought from South Africa.

CA44. India-Italy Bilateral Relations

A brief history:

India and Italy are ancient civilizations with rich cultural heritage. The classical languages, Sanskrit and Latin both belong to the Indo-European language family. People of these two ancient civilizations have known, interacted, and traded with each other for over 2000 years. **Italian port cities were**

important trading posts on the spice route. The Venetian merchant Marco Polo, during his travels to the east, also traveled to India in the 13th century and wrote about his experiences.

Nobel Laureate Rabindranath Tagore visited Italy in May-June 1926, a visit arranged by Carlo Formichi, a Professor of Sanskrit at the University of Rome.

Mahatma Gandhi visited Rome in December 1931 on his way back to India from the Round Table Conference in London.

Leaders of the Indian freedom struggle read the works of the Italian revolutionary Mazzini of early 19th century, who worked for a Democratic Republic of Italy.

Indian troops, serving with the British Indian Army, were deployed in Italy during World War II, fighting against the Germans and Mussolini's forces. These included the Rajputana Rifles and Gurkha Rifles. The 10th Indian Division took part in the East African Allied campaign against the Italians in Somaliland and Abyssinia.

Political Relations:

Political relations between India and Italy were established in 1947.

Recent activities:

PM Modi and PM Conte co-chaired a Virtual Summit between India and Italy on 06 November 2020 and held extensive talks on bilateral, regional and global issues. **2020-2025 Action Plan was adopted that set an ambitious agenda for an enhanced Partnership between the countries.**

PM Modi paid his first official visit to Italy in October 2021 to attend the G20 Summit at the invitation of PM Draghi.

On 2-3 March 2023, PM Meloni paid her first ever state visit to India following her victory in the Italian general elections in September 2022. This was the first high level visit from Italy to India after a gap of 5 years. The visit also came in the backdrop of the 75th anniversary of establishment of diplomatic relations between India and Italy.

Indi-Italy Economic relation:

values in US \$ millions

Country / Region: ITALY

S.No.	Year	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024
1.	EXPORT	4,970.81	4,735.74	8,180.76	8,691.43	8,765.78
2.	%Growth		-4.73	72.74	6.24	0.86
3.	India's Total Export	313,361.04	291,808.48	422,004.40	451,070.00	437,112.97
4.	%Growth		-6.88	44.62	6.89	-3.09
5.	%Share	1.59	1.62	1.94	1.93	2.01
6.	IMPORT	4,490.92	3,862.05	5,048.47	5,591.91	5,795.37
7.	%Growth		-14.00	30.72	10.76	3.64
8.	India's Total Import	474,709.28	394,435.88	613,052.05	715,968.90	675,429.87
9.	%Growth		-16.91	55.43	16.79	-5.66
10.	%Share	0.95	0.98	0.82	0.78	0.86
11.	TOTAL TRADE	9,461.74	8,597.79	13,229.22	14,283.34	14,561.15
12.	%Growth		-9.13	53.87	7.97	1.95
13.	India's Total Trade	788,070.32	686,244.36	1,035,056.45	1,167,038.89	1,112,542.84
14.	%Growth		-12.92	50.83	12.75	-4.67
15.	%Share	1.20	1.25	1.28	1.22	1.31
16.	TRADE BALANCE	479.89	873.69	3,132.29	3,099.52	2,970.41
17.	India's Trade Balance	-161,348.24	-102,627.40	-191,047.65	-264,898.90	-238,316.89

If you see all European nations, check the trade:

S. No.	Country
1	Netherland
2	Germany
3	Switzerland
4	U K
5	Belgium
6	Italy
7	France
8	Turkey
9	Spain
10	Ireland
11	Top 10 countries

Exports (USD Billion)				Imports (USD Billion)				Total merchandise trade (USD Billion)			
2020–21	2021–22	2022–23	2023–24(A)	2020–21	2021–22	2022–23	2023–24(A)	2020–21	2021–22	2022–23	2023–24(A)
6.47	12.54	21.62	22.37	3.32	4.48	5.96	4.97	9.79	17.02	27.58	27.34
8.12	9.88	10.13	9.84	13.64	14.97	15.93	16.27	21.77	24.85	26.07	26.11
1.26	1.35	1.35	1.53	18.23	23.39	15.79	21.24	19.49	24.74	17.14	22.77
8.16	10.46	11.41	12.92	4.96	7.02	8.96	8.42	13.11	17.48	20.37	21.34
5.24	10.08	8.86	7.84	6.94	9.95	9.18	7.24	12.18	20.03	18.04	15.08
4.74	8.18	8.69	8.77	3.86	5.05	5.56	5.80	8.60	13.23	14.25	14.56
4.78	6.64	7.61	7.14	4.34	5.78	5.77	6.24	9.13	12.42	13.38	13.38
3.95	8.72	9.61	6.66	1.47	2.00	4.21	3.78	5.42	10.71	13.82	10.44
3.24	4.37	4.66	4.79	1.51	2.05	3.00	2.45	4.75	6.78	7.66	7.25
0.56	0.69	0.58	0.70	0.41	1.14	3.63	5.67	0.98	1.82	4.21	6.37
46.52	73.27	83.52	82.55	58.69	75.82	78.00	82.08	105.21	149.10	162.53	164.43

CA45. India's First Multinational Air Exercise: Tarang Shakti2024

News:

India to host its first multinational air exercise Tarang Shakti in August

The IAF has invited friendly foreign countries who share some interoperability; 10 countries likely to participate in two-phase exercise; Germany to showcase A-400M, which is competing for an IAF tender

Updated – June 16, 2024 07:42 pm IST Published – June 16, 2024 07:28 pm IST – NEW DELHI

It is a first multinational air exercise to be hosted by the Indian Air force.

Objective:

The plan is to invite friendly foreign countries with whom the IAF interacts regularly and has a certain degree of interoperability.

The exercise is now scheduled to be held in two phases.

The first will be held in southern India in the first two weeks of August and the second will be in the western sector from the end of August to mid-September.

Participating countries: Australia, France, Germany, Japan, Spain, the United Arab Emirates, the United Kingdom, and the United States. Germany will deploy fighter jets and also an A-400M transport aircraft.

CA46. *Filoboletus manipularis*.

News:

Scientists discover rare species of bioluminescent mushrooms in Kasaragod, warn against their consumption

Dilip Kumar Rai, botany expert and principal at Yangsum Senior Secondary School, Sikkim, explains, "The discovery of *Filoboletus manipularis* in Kasaragod is a remarkable addition to our understanding of fungal biodiversity."

Recently, researchers have discovered a rare species of bioluminescent mushrooms in the forests of Kasaragod which are scientifically known as *Filoboletus manipularis*.

These fascinating fungi, scientifically known as *Filoboletus manipularis*, are capable of producing their own light through a biochemical process.

They were found after a micro-fungal survey was conducted jointly by the Kasaragod division of the Kerala Forest and Wildlife Department and the Mushrooms of India Community in the Ranipuram forest.

According to scientists, the glow you see in *Filoboletus manipularis* is thanks to a chemical reaction involving luciferin (a pigment) and luciferase (an enzyme), with oxygen playing a critical role. This

reaction produces light, a trait shared with other bioluminescent organisms like fireflies and certain marine creatures.

CA47. Persistent Organic Pollutants (POPs)

Persistent Organic Pollutants (POPs) are organic chemical substances, that is, they are carbon-based. They possess a particular combination of physical and chemical properties such that, once released into the environment, they:

- ✓ remain intact for exceptionally long periods of time (many years);
- ✓ become widely distributed throughout the environment as a result of natural processes involving soil, water and, most notably, air;
- ✓ accumulate in the living organisms including humans, and are found at higher concentrations at higher levels in the food chain; and
- ✓ are toxic to both humans and wildlife.

Specific effects of POPs can include cancer, allergies and hypersensitivity, damage to the central and peripheral nervous systems, reproductive disorders, and disruption of the immune system.

Some POPs are also considered to be endocrine disrupters, which, by altering the hormonal system, can damage the reproductive and immune systems of exposed individuals as well as their offspring; they can also have developmental and carcinogenic effects.

There are now many POPs under the Stockholm Convention. But the initial 12 were:

- ✓ **Pesticides:** aldrin, chlordane, DDT, dieldrin, endrin, heptachlor, hexachlorobenzene, mirex, toxaphene;
- ✓ **Industrial chemicals:** hexachlorobenzene, polychlorinated biphenyls (PCBs); and
- ✓ **By-products:** hexachlorobenzene; polychlorinated dibenzo-*p*-dioxins and polychlorinated dibenzofurans (PCDD/PCDF), and PCBs.

Learn about Stockholm Convention:

The text of the Stockholm Convention was adopted by the Conference of the Plenipotentiaries (Stockholm, 22 May 2001) and entered into force on 17 May 2004.

The chemicals targeted by the Stockholm Convention are listed in the annexes:

Annex A (Elimination)

Parties must take measures to eliminate the production and use of the chemicals listed under Annex A. Specific exemptions are available in Annex A and apply only to Parties that have registered for them.

Annex B (Restriction)

Parties must take measures to **restrict** the production and use of the chemicals listed under Annex B in light of any applicable acceptable purposes and/or specific exemptions listed in the Annex.

DDT 🟢

Perfluorooctane sulfonic acid (PFOS), its salts and perfluorooctane sulfonyl fluoride (PFOSF) 🟢 🟡

Annex C (Unintentional production)

Parties must take measures to reduce the **unintentional releases** of chemicals listed under Annex C with the goal of continuing minimization and, where feasible, ultimate elimination.

India ratified the Stockholm Convention on January 13, 2006, after signing it in May 2002.

CA48. EU adopted the Nature Restoration Law (NRL)

News:

Council of the EU | Press release | 17 June 2024 11:13

Nature restoration law: Council gives final green light

The EU Environmental Council adopted the Nature Restoration Law (NRL) on June 17, 2024, in what is being described as a win for the continent's environment.

Objectives

The law aims to restore ecosystems, habitats and species across the EU's land and sea areas in order to

- enable the long-term and sustained recovery of biodiverse and resilient nature
- contribute to achieving the EU's climate mitigation and climate adaptation objectives
- meet international commitments

Targets

The regulation combines an overarching restoration objective for the long-term recovery of nature in the EU's land and sea areas with binding restoration targets for specific habitats and species. These measures should cover at least 20% of the EU's land and sea areas by 2030, and ultimately all ecosystems in need of restoration by 2050.

CA49. World Day to Combat Desertification and Drought 2024

News:


United Nations
World Day to Combat Desertification and Drought, 17 June

The global observance of the Desertification and Drought Day 2024 was hosted by the Government of Germany on 17 June in Bonn.

The global theme of this years' *Desertification and Drought Day United for Land. Our Legacy. Our Future.*

About United Nations Convention to Combat Desertification (UNCCD):

1. The United Nations Convention to Combat Desertification (UNCCD) **was established in 1994** to protect and restore our land and ensure a safer, just, and more sustainable future.
2. The **UNCCD is the only legally binding framework** set up to address desertification and the effects of drought.
3. There are **197 Parties to the Convention**, including 196 country Parties and the European Union.
4. The Convention – based on the principles of participation, partnership and decentralization – is a multilateral commitment to mitigate the impact of land degradation, and protect our land so we can provide food, water, shelter and economic opportunity to all people.
5. The **Convention unites governments, scientists, policymakers, the private sector and communities** around a shared vision to restore and manage the world's land.

The UNCCD 2018-2030 Strategic Framework is the most comprehensive global commitment to achieve Land Degradation Neutrality (LDN): It aims to restore the productivity of vast expanses of degraded land, improve the livelihoods of more than 1.3 billion people, and reduce the impacts of drought on vulnerable populations.

The UNCCD permanent secretariat is located in Bonn, Germany.

The COP has been meeting biennially since 2001, and has held 14 sessions. UNCCD COP15 was held from 9-20 May 2022 in Abidjan, Cote d'Ivoire. **The next UNCCD COP16 will take place 2-13 December 2024 in Saudi Arabia.**

CA50. New Collective Quantified Goal on climate finance

The **New Collective Quantified Goal on Climate Finance (NCQG)** is a new global climate finance goal that the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA) **shall set from a floor of USD 100 billion per year, prior to 2025.**

What is the purpose of the new collective quantified goal on climate finance?

In 2021, Parties agreed the aim of the NCQG as to contributing to accelerating the achievement of Article 2 of the Paris Agreement of holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 °C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change; increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emission development in a manner that does not threaten food production; and making finance flows consistent with a pathway towards low greenhouse gas emission and climate-resilient development.

Who should pay up for climate action? There is dispute between developed and developing countries.

The expansion of the contributor base for the new goal was deadlocked. Simply put, parties from the Global North, including the United States, the European Union and Australia, are calling for an increase in the contributor base to the new finance goal in order to “reflect new economic realities.”

Developing countries argue that this debate is irrelevant because the NCQG is intended to facilitate the transfer of climate finance from developed to developing countries. This is a fundamental schism that is likely to escalate.

The UNFCCC (or the Convention) and the Paris Agreement do not include a legal definition of ‘developed’ and ‘developing’ countries. The interpretation of the terms within these contexts has primarily been based on the grouping into ‘Annex II’ and ‘Non-Annex I’ Parties, set in 1992 at the time of the adoption of the Convention.

The former are the developed countries that must provide financial assistance to developing countries under the Convention. **Several of these Annex II nations are currently arguing that this categorisation is outdated in the NCQG context.**

This was strongly opposed that the question of who ‘else’ should provide finance was outside the mandate of the NCQG for several reasons. **Firstly, because it is supposed to be a goal for the provision of finance from developed to developing countries, with historical responsibility for emissions by developed countries being the premise.**

Secondly, they pointed to Articles 9.1 and 9.3 of the Paris Agreement to be read together, **which speak to developed countries' obligations to provide financial support**. Further, the goal is a continuation of the \$100 billion commitment by developed countries.

CA51. Rift Valley fever (RVF)

News:

Climate change expanding geographical range of Rift Valley fever disease in eastern Africa

Disease found to be on the rise in highlands of Uganda and Kenya, which are becoming hotter and wetter

RVF virus is a member of the Phlebovirus genus. The virus was first identified in 1931 during an investigation into an epidemic among sheep on a farm in the Rift Valley of Kenya.

From WHO website:

- **Rift Valley fever (RVF) is a viral zoonosis that primarily affects animals but can also infect humans.**
- **The majority of human infections result from contact with the blood or organs of infected animals.**
- **Human infections have also resulted from the bites of infected mosquitoes.**
- **To date, no human-to-human transmission of RVF virus has been documented.**
- **The incubation period (the interval from infection to onset of symptoms) for RVF varies from 2 to 6 days.**
- **Outbreaks of RVF in animals can be prevented by a sustained programme of animal vaccination.**

Most human infections result from direct or indirect contact with the blood or organs of infected animals. The virus *can be transmitted to humans through the handling of animal tissue during slaughtering or butchering, assisting with animal births, conducting veterinary procedures, or from the disposal of carcasses or fetuses.*

Treatment and vaccines

As most human cases of RVF are relatively mild and of short duration, no specific treatment is required for these patients. For the more severe cases, the predominant treatment is general supportive therapy.

An inactivated vaccine has been developed for human use. However, this vaccine is not licensed and is not commercially available. It has been used experimentally to protect veterinary and laboratory personnel at high risk of exposure to RVF. Other candidate vaccines are under investigation.

About:

The term Great Rift Valley is most often used to refer to the valley of the **East African Rift, the divergent plate boundary which extends from the Afar Triple Junction southward through eastern Africa, and is in the process of splitting the African Plate into two new and separate plates.** Geologists generally refer to these evolving plates as the Nubian Plate and the Somali Plate.



Map of the Great Rift Valley

CA52. IPBES wins prestigious Blue Planet Prize

We will learn two things here:

- a. Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)
- b. Blue Planet Prize

About IPBES:

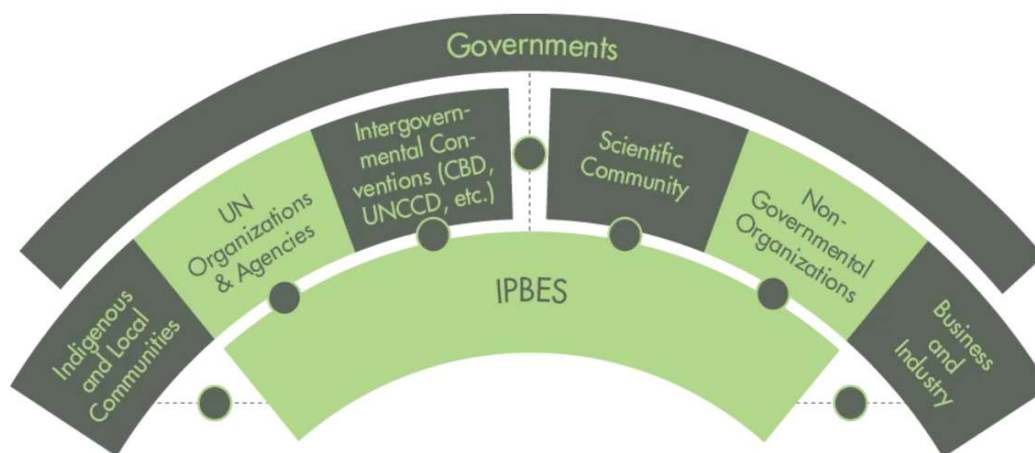
The **Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)** is an **independent intergovernmental body** established by States to strengthen the science-policy interface for biodiversity and ecosystem services for the conservation and sustainable use of biodiversity, long-term human well-being and sustainable development.

It was established in Panama City, on 21 April 2012 by 94 Governments.

It is not a United Nations body.

However, at the request of the IPBES Plenary and with the authorization of the UNEP Governing Council in 2013, **the United Nations Environment Programme (UNEP) provides secretariat services to IPBES.**

A large number of NGOs, organizations, conventions and civil society groupings also participate in the formal IPBES process as observers.



✓ What does IPBES do?

The work of IPBES can be broadly grouped into four complementary areas:

- ✓ **Assessments:** On specific themes (e.g. "Pollinators, Pollination and Food Production"); methodological issues (e.g. "Scenarios and Modelling"); and at both the regional and global levels (e.g. "Global Assessment of Biodiversity and Ecosystem Services").
- **Policy Support:** Identifying policy-relevant tools and methodologies, facilitating their use, and catalyzing their further development.
- ✓ **Building Capacity & Knowledge:** Identifying and meeting the priority capacity, knowledge and data needs of our member States, experts and stakeholders.
- ✓ **Communications & Outreach:** Ensuring the widest reach and impact of our work.

Members:

IPBES was established in 2012 by 94 governments, and its membership has continued to grow as IPBES' impact has increased.

All States Members of the United Nations are eligible for IPBES membership.

Country ▾	Status	Region	Member since
 India	→ Member	Asia-Pacific States	21 Apr 2012

About Blue Planet Prize:

The Blue Planet Prize, awarded by Japan's Asahi Glass Foundation, is awarded annually to individuals and organisations to recognise outstanding achievements in scientific research and its application, which have helped provide solutions to global environmental problems.

The prize includes an award of \$500,000.

CA53. 2024 WHO Bacterial Priority Pathogens List (WHO BPPL)

The 2024 WHO Bacterial Priority Pathogens List (WHO BPPL) is an important tool in the global fight against antimicrobial resistance.

Building on the 2017 edition, the 2024 WHO BPPL updates and refines the prioritization of antibiotic-resistant bacterial pathogens to address the evolving challenges of antibiotic resistance.

The list categorizes these pathogens into **critical, high, and medium priority groups** to inform research and development (R&D) and public health interventions.

In 2017, WHO developed the first BPPL to guide investment into the R&D of new antibacterials (3). Twenty-five ABR phenotypes were initially prioritized, but the final list was streamlined to include 13 bacterial pathogens (phenotypes).

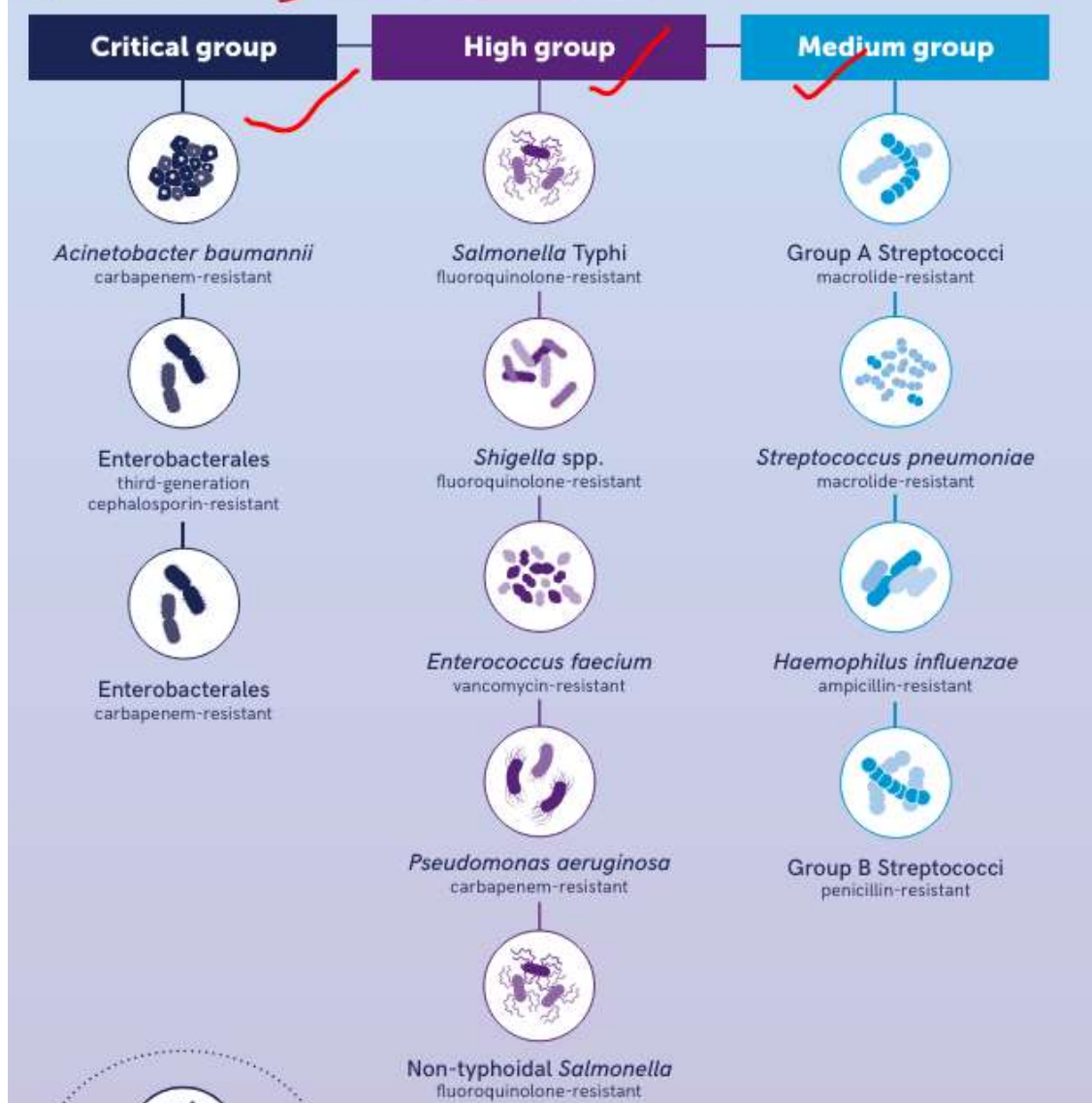
Since its launch, the BPPL has been used to analyse antibacterials in the pipeline, and the results have been published in annual WHO reports.

What is new in 2024 updates?

In this update, five pathogens-antibiotic combinations that were included in the 2017 version were removed based on evidence and expert consensus: clarithromycin-resistant *Helicobacter pylori*, fluoroquinolone-resistant *Campylobacter* spp., penicillin-non-susceptible *Streptococcus pneumoniae*, third-generation cephalosporin-resistant *Providencia* spp. and vancomycin-intermediate and -resistant *S. aureus*.

Four new combinations were added: macrolide-resistant Group A Streptococci, penicillin-resistant Group B Streptococci, macrolide-resistant *Streptococcus pneumoniae*, and RR-TB. Finally, 23 antibiotic-bacteria phenotypes combinations were included in BPPL-2024. Fig 2. compares the ranking of priority

✓ Fig. 1. WHO Bacterial Priority Pathogens List, 2024 update



✓ Aim and scope

The purpose of the BPPL 2024 is to guide resource allocation, guide and promote R&D of novel antibacterial agents and support development of effective strategies to prevent, control and treat infections caused by priority pathogens. This update addresses only ABR bacterial phenotypes for which there is the greatest unmet need and that result in the highest, most significant public health burden.

The aim of the update is to maintain the relevance of the WHO BPPL by adding new evidence and experience, ensuring that it continues to:

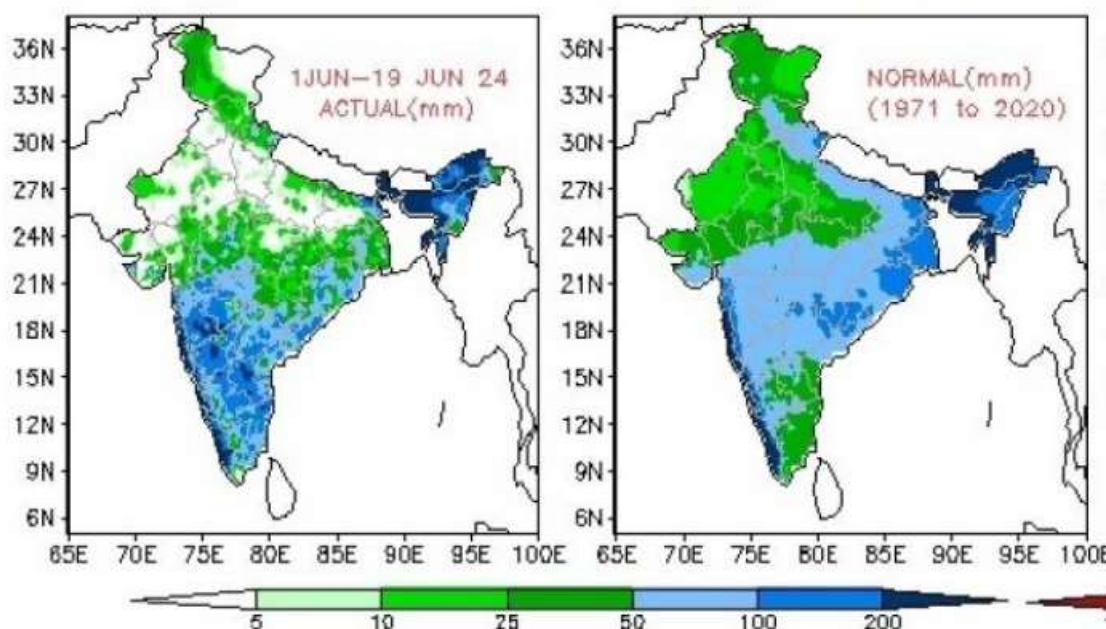
- guide R&D for new, effective antibiotic therapies, aligning investment with clinical and public health needs;
- facilitate international coordination to drive R&D towards the development of innovative, effective antibacterial agents and other prevention and control tools, aligning investment with clinical and public health needs;

CA54. One of the longest stalling periods of Indian monsoon

The Bay of Bengal branch of the southwest monsoon has been stalled since May 31, a day after the onset of the monsoon simultaneously over Kerala and Northeast India. **That is a stalling period of 19 days as of June 19, one of the longest in recent time, according to data from the India Meteorological Department (IMD).**

The Arabian Sea branch of the monsoon has been stalled since June 10, which is a stalling period of nine days. The stalled monsoon has led to an all-India deficit in monsoon rainfall of 20 per cent between June 1 and June 18.

It is also one of the reasons for the late heatwaves in most of north India and many parts of west, central and eastern India since the beginning of June.



Why this year stalling is different from previous years?

‘Break periods’ are a normal characteristic for the monsoon. But some of the recent breaks have been much longer than normal. The season is usually said to be on a break when the monsoon trough moves towards the foothills of the Himalayas.

During this period, it starts raining heavily in the Himalayan and the northeastern states while the rest of the country remains dry, especially what the IMD defines as the ‘core monsoon zone’. The core monsoon zone stretches from Gujarat in the west to West Bengal and Odisha in the east.

The monsoon trough is an elongated low-pressure region that causes the rainfall during the monsoon season over the country. **This normally happens once or twice during the season once the monsoon trough has settled into its normal position.**

Currently, the monsoon trough has not even reached its normal position. Therefore, this stalling is different from the regular break period of the monsoon.

How does the Indian monsoon develop?

Every year, around the first week of June, a vast expanse of roiling grey clouds advances from the Arabian sea and makes landfall in Kerala.

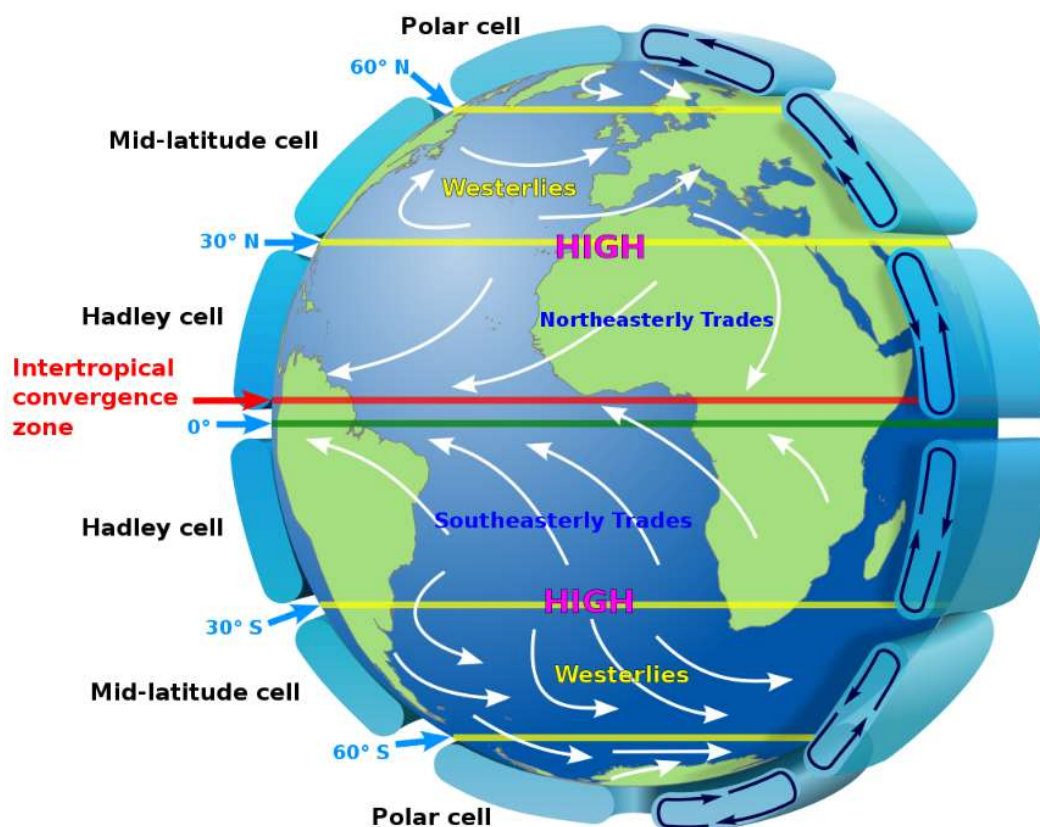
From June to September, the southwest or summer monsoon moves across India, bathing the country in rain – during this period, India receives 70-90% of its annual rainfall. In the cooler months, from October to November, the retreating monsoon or the Northeast monsoon sets in, and brings rain to the eastern coast of India, especially Tamil Nadu.

As per the modern 'energetics' theory:

The physics of the Indian **summer monsoon** is **not only affected by the amount of energy available from the sun, but also how much water vapour is available in the air and how well the water vapour can be lifted upward to form clouds.**

The tilt in the Earth's axis causes different parts of the Earth to receive direct rays from the sun during different times of the year.

During summer in the northern hemisphere, the Tropic of Cancer receives direct rays from the sun, and the continental land masses in this hemisphere heat up considerably more than the oceans, creating a low-pressure zone over India and Central Asia. **This causes the intertropical convergence zone (or ITCZ) – an area of low pressure that forms a band girdling the Earth – to shift northwards from the Equator towards the Tropic of Cancer.**



The Inter-Tropical Convergence Zone is an area of low pressure that forms a band girdling the Earth. This zone is formed at the meeting of the southeast and northeast trade winds. Photo by Kaidor/Wikimedia Commons.

This zone is formed at the meeting of the southeast and northeast trade winds, which are winds close to the Earth's surface that blow from east to west just north and south of the Equator, due to the Earth's rotation from west to east.

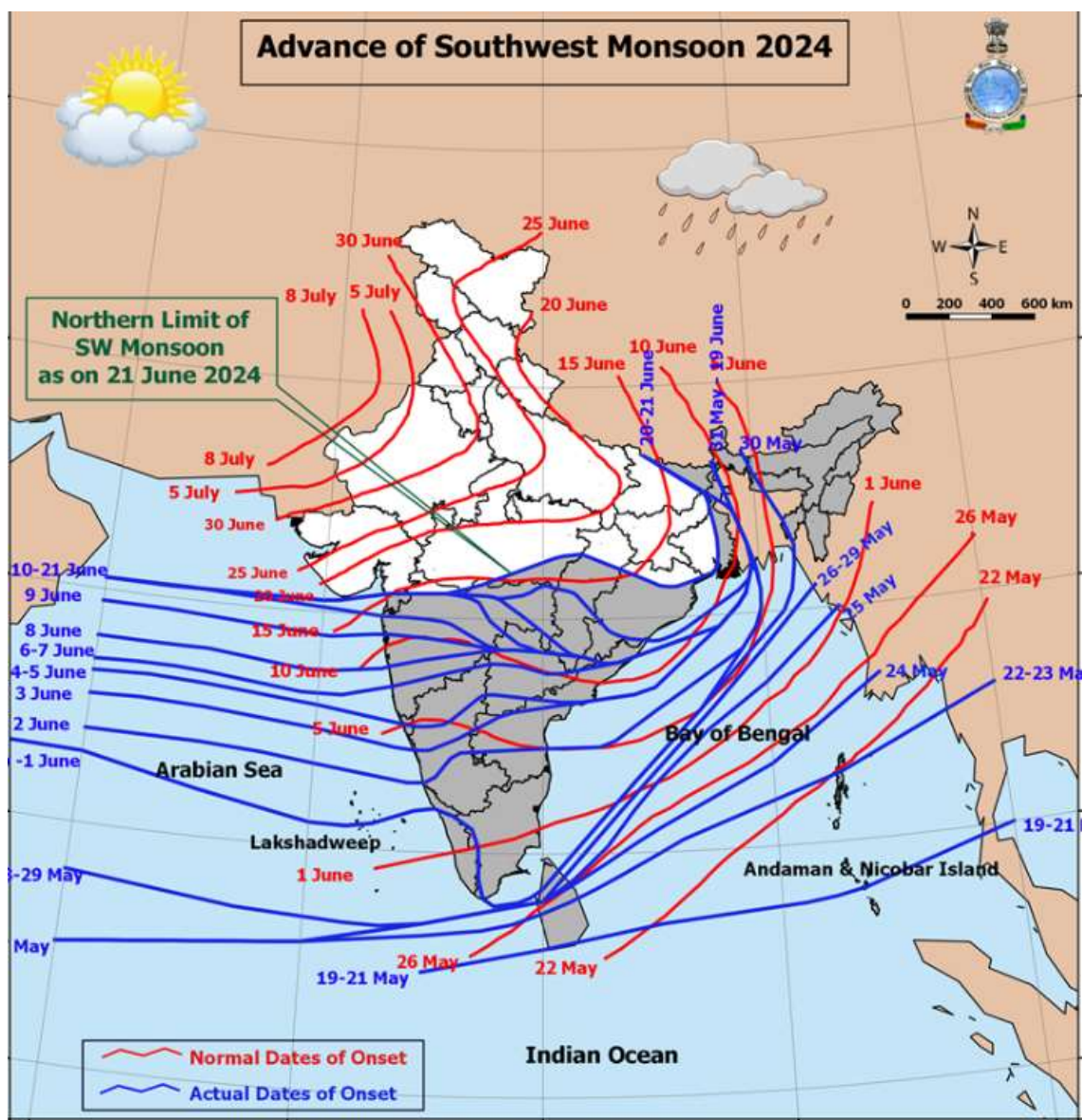
When this shift occurs, the ITCZ shifts northwards from below India to run directly through the Indian subcontinent and strengthens the low pressure forming over this area. At the same time, the southeast trade winds, which cross the Equator due to this movement, become deflected towards the east due to the Coriolis effect (a force that causes fluids like air and water to curve as they travel across the Earth's surface).

These deflected trade winds now blow towards India from the southwest, picking up large amounts of moisture from the Arabian sea. As they hit the Indian peninsula, they cause the southwest or Indian summer monsoon.

The summer monsoon winds split into two arms:

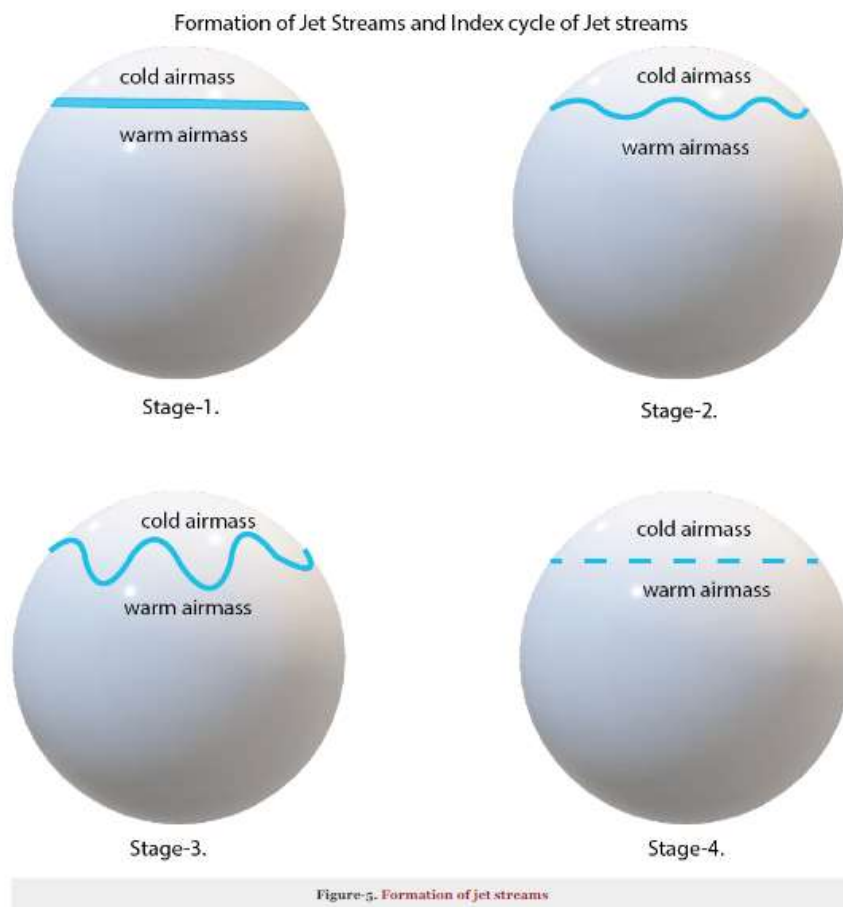
The summer monsoon winds split into two arms with **one traveling over the Arabian sea, while the other moves over the Bay of Bengal.**

The Arabian Sea arm causes rainfall all along India's western coast. The Bay of Bengal arm over the eastern coast and moves over the Bay of Bengal to strike against the Bengal coast and brings rain to the southern slopes of the Shillong plateau. The Himalayas, which act as a barrier towards the further inland movement of this arm, herd it towards northern India. **The two arms converge over Punjab and Himachal Pradesh by mid-July.**



Apart from ITCZ, there are many other events:

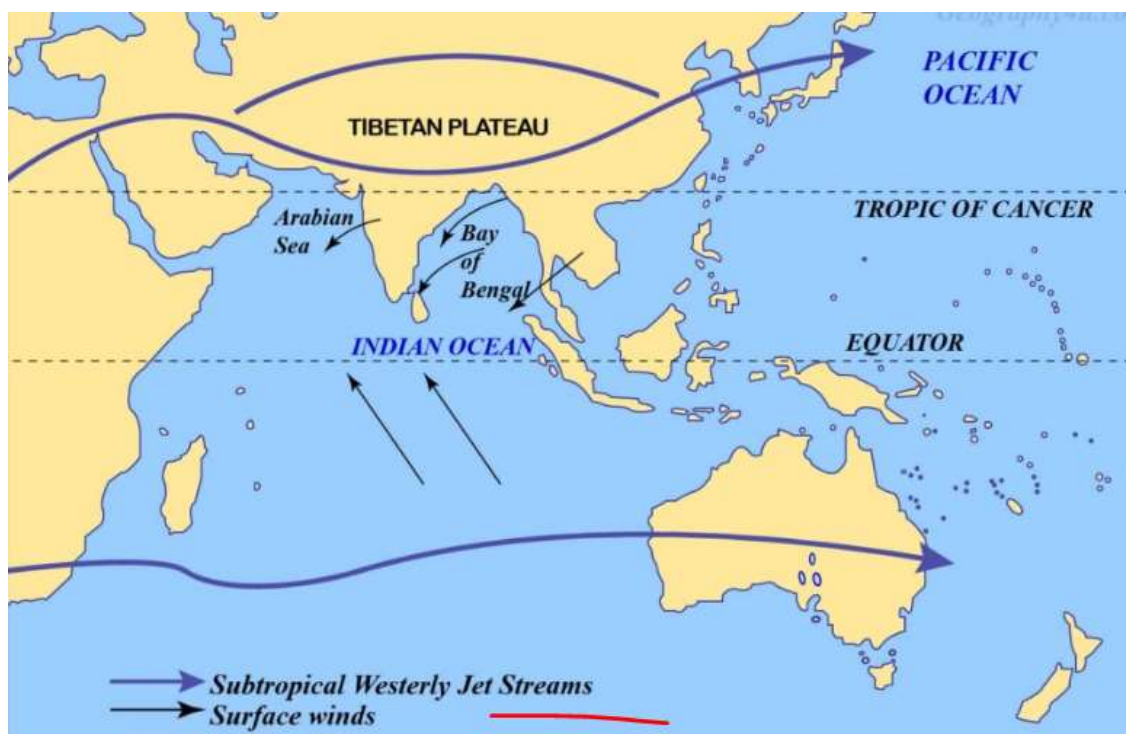
These events involve **jet streams**, which are bands of narrow, meandering, and fast-moving winds (usually 100-200 Km/h but can go up to 400 Km/h) in the upper levels of the atmosphere (between 9 km and 16 km above sea-level).



There are **three jet streams** that are thought to affect the Indian summer monsoon – **the subtropical westerly, the tropical easterly, and the Somali or cross-equatorial jet stream.**

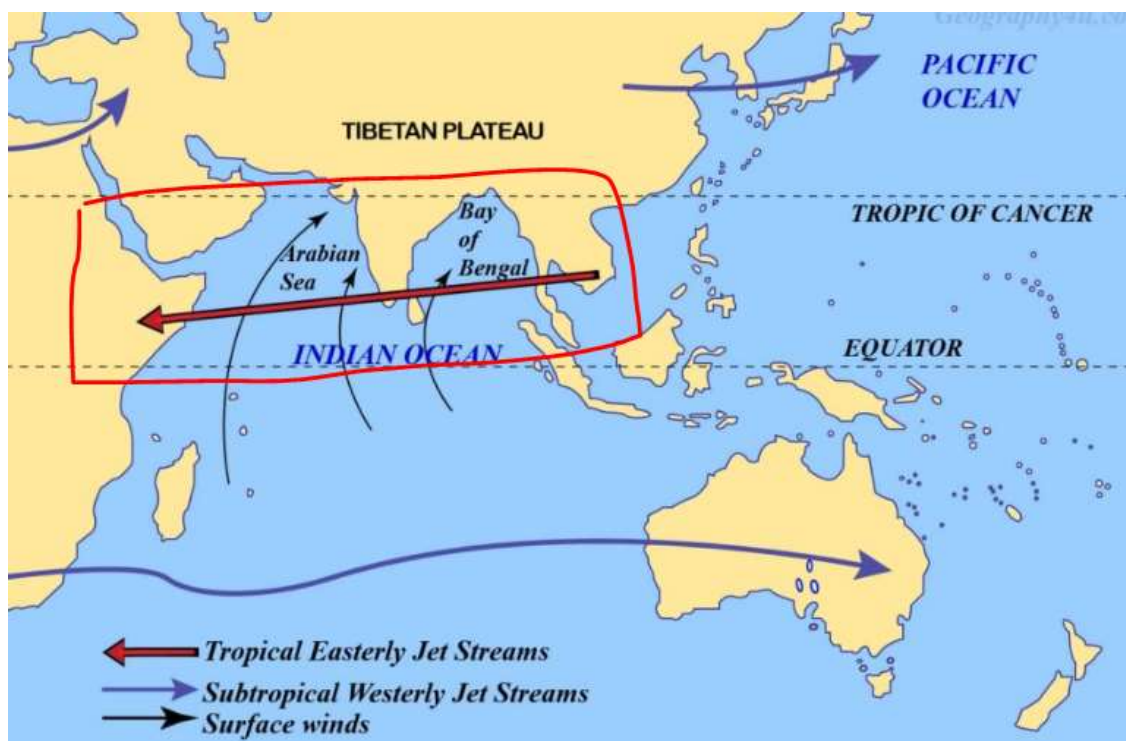
What are the subtropical, tropical easterly, and Somali jet streams? How do they affect the southwest monsoon?

The subtropical jet stream is formed when warm air from the equator meets the cool air from the polar regions and flows from west to east.



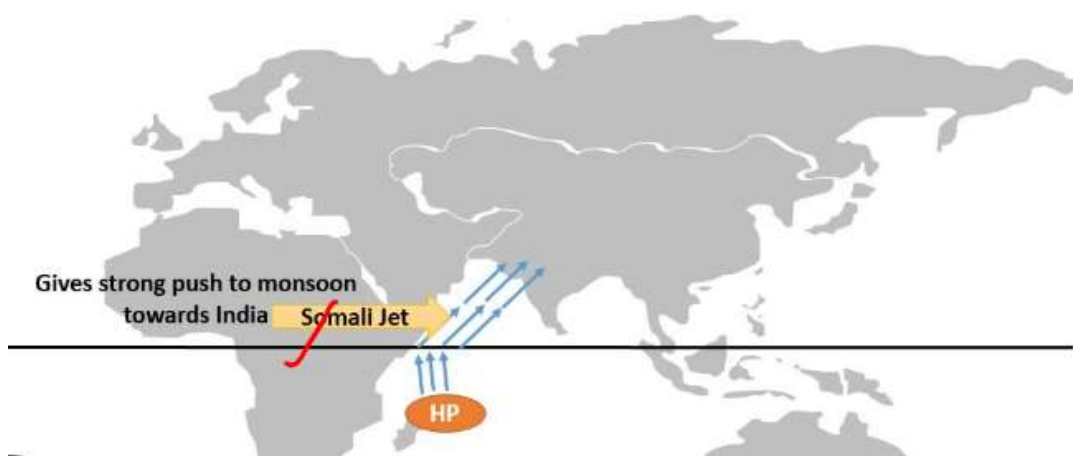
During summer in the northern hemisphere, as the Tropic of Cancer begins to receive the sun's direct rays, two things happen. One, in response to a northward shift in heating patterns during the Indian summer, the subtropical jet stream moves northwards, right over the Tibetan plateau from its position over central India.

Due to this, the second event occurs – a seasonal jet stream, the tropical easterly, is set up. As the Tibetan plateau begins to heat up, the air rises to meet the subtropical westerly jet stream; the intermingling of these two currents is affected by the Coriolis force, which deflects the newly formed tropical jet stream **towards the west.**



The tropical jet stream flows from east-to-west (10-12 km above the Gangetic plains) across India, and subsides above the Indian Ocean, where it then lends extra energy to and 'pushes' the southwest monsoon towards India.

The Somali jet stream is set up due to the intense heating of the air over northern Bay of Bengal from moist convection, which attracts winds from the equatorial Indian Ocean toward the Indian subcontinent forming the low-level westerlies (prevailing winds from the west toward the east in the middle latitudes) over the Arabian Sea. These westerly winds bring moisture over Indian land, thus further enhancing the convection.



Therefore, the monsoon itself is thought to intensify the movement of the southwest winds of the lower atmosphere. The accumulation of water vapour in the atmosphere is held responsible for the 'burst' or sudden onset of the Indian summer monsoon in early June, and for the rapid movement of the summer monsoon across India.

What other factors affect the Indian monsoons?

The Indian monsoon is an extremely complex climate pattern that is affected by many factors, of which the most well-known are the **El Nino and La Nina, the Indian ocean dipole (IOD), and the EQUINOO (Equatorial Indian Ocean oscillation)**.

CA55. IUCN changes Iberian lynx's status to 'vulnerable' from 'endangered'

News:

WILDLIFE & BIODIVERSITY

Back from the brink: IUCN changes Iberian lynx's status to 'vulnerable' from 'endangered' in conservation success story

From 94 individuals, the lynx now numbers over 2,000 in Spain and Portugal in “the greatest recovery of a cat species ever achieved through conservation”

The International Union for Conservation of Nature (IUCN) moved its conservation status from 'Endangered' to 'Vulnerable' on June 20, in what is one of the most successful conservation stories of our time.



📷 An Iberian Lynx. Photo: iStock

The population of the lynx, found in Spain and Portugal, has increased exponentially from 62 mature individuals in 2001 to 648 in 2022.

But we will talk about the Lynx found in India, is called Eurasian Lynx.

There are six subspecies of Eurasian lynx (*Lynx lynx*) found in Europe and North-central Asia. The subspecies found in India is known as the central Asian lynx (*Lynx lynx isabellinus*). It is also known as Turkestan lynx, Tibetan lynx or Himalayan lynx.

The Eurasian lynx is the largest species of the genus lynx and is listed as Least Concern in the IUCN Red List. The species is listed under Schedule I of the Wildlife Protection Act which means it has the highest level of protection.

In Ladakh there are three major felids – snow leopard, being the largest cat, is the apex predator, the Eurasian lynx subspecies which is a medium size wildcat and Pallas's cat which is a small wildcat. The Eurasian lynx found in Ladakh has long legs and big paws. Its tail is very short and the ears have a black back with long black hair tufts. The fur is yellowish with a faint and almost unmarked coat.

While other subspecies of Eurasian lynx are mostly found in forested areas, the central Asian lynx or Himalayan lynx inhabits a barren environment.

Two wild cats found in India – Pallas' cat and Central Asian lynx – have been included in the list of migratory species to be conserved under the Convention on the Conservation of Migratory Species (CMS) of Wild Animals at the recently concluded 14th meeting of the Conference of Parties (COP14) to the Convention, held in Uzbekistan's Samarkand. The species were included in the CMS Appendix II, which covers migratory species with unfavourable conservation status, requiring international cooperation for their conservation and management. This inclusion in Appendix II opens the door for better conservation of these migratory felids known for their elusive behaviour.

CA56. 67th GEF Council

The 67th meeting of the Global Environment Facility (GEF) held from June 17-20, 2024 ended with an approval for \$736.4 million in funding. A total of 34 nature protection and renewal projects have been provided funds.

ENVIRONMENT

67th GEF Council: Funds for projects to protect environment in developing countries approved

The work done now would help the world meet the goals and targets set under the Biodiversity Plan

67th GEF Council Meeting

Overview

Council Documents

Full Event Video

June 17-20, 2024
Date

About GEF:

The Global Environment Facility (GEF), established on the eve of the 1992 Rio Earth Summit.

The GEF was established before the 1992 Rio Earth Summit as a single entity to address global environmental challenges including biodiversity loss, climate change, and pollution. Today, it includes six funds dedicated to inter-related priorities for people and the planet.



Global Environment Facility

Trust Fund: Focus on biodiversity, chemicals and waste, climate change, international waters, and land degradation, plus integrated programming.



Global Biodiversity Framework

Fund: Newly-created fund to support the Kunming-Montreal Global Biodiversity Framework and its 2030 nature-positive goals.



Nagoya Protocol Implementation

Fund: Supports action on access to genetic resources and the fair and equitable sharing of benefits arising from their utilization.



Least Developed Countries

Fund: The only dedicated source of multilateral funding for Least Developed Countries' most urgent climate adaptation needs.



Special Climate Change Fund:

Climate adaptation fund focused on technology and innovation, with dedicated window for Small Island Developing States.



Capacity-building Initiative for Transparency Trust Fund:

Support for climate change data and reporting, in support of the Paris Agreement's Enhanced Transparency Framework

The Council, the GEF's main governing body, comprises 32 members appointed by constituencies of GEF member countries (14 from developed countries, 16 from developing countries, and two from economies in transition).

The GEF provides funding to assist developing countries in meeting the objectives of international environmental conventions.

The GEF serves as "financial mechanism" to five conventions, which are Convention on Biological Diversity (CBD), United Nations Framework Convention on Climate Change (UNFCCC), Stockholm Convention on Persistent Organic Pollutants (POPs), UN Convention to Combat Desertification (UNCCD), and Minamata Convention on Mercury.

Focal Points:

Each of the GEF member countries has designated government officials responsible for GEF activities.

There are two types of GEF Focal Points: political and operational. All the GEF member countries have Political Focal Points, while only recipient countries eligible for GEF support have Operational Focal Points.

- a. **GEF Political Focal Points focus mainly on governance, including policies and decisions, and relations between member countries within their constituencies.**
- b. **GEF Operational Focal Points are responsible for operations of GEF activities within their countries.**

If we take India, **Political Focal Points:** Department of Economic Affairs, Ministry of Finance, Government of India

Operational Focal Point: Ministry of Environment, Forest and Climate Change, Government of India.

India is also a donor to GEF Fund:

Funding

The GEF Trust Fund is replenished every four years, in a process that brings together donor and recipient countries. In a unique feature, some recipients are also donors to the GEF. Funding is primarily provided as grants, and the GEF's non-grant instrument works to unlock private sector investment in the environment through de-risking and blended finance.

GEF REPLENISHMENT CYCLES

\$5 billion

\$4

\$3

\$2

\$1

\$0

Pilot phase (1991–1994) GEF-1 (1994–1998) GEF-2 (1998–2002) GEF-3 (2002–2006) GEF-4 (2006–2010) GEF-5 (2010–2014) GEF-6 (2014–2018) GEF-7 (2018–2022) GEF-8 (2022–2026)

1.00

2.00

2.75

3.00

3.13

4.34

4.43

4.10

5.33

GEF 8 REPLENISHMENT DONORS

2022–2026 • \$5.33 billion • 29 donors



CA57. Cotton Production and Consumption in India

News:

Ministry of Textiles

Third Meeting of Committee on Cotton Production and Consumption (COCPC) for the Cotton Season 2023-24 held

As per the PIB, cotton consumption has increased and this year second highest consumption out of last ten years has been marked.

Cotton Balance Sheet for the cotton season 2022-23 and 2023-24 as drawn by COCPC as on 24.06.2024

Particulars	2022-23		2023-24 (P)	
	(In lakh bales of 170 kg. Each)	(in Thousand Tons)	(In lakh bales of 170 kg. Each)	(in Thousand Tons)
SUPPLY				
Opening Stock	39.48	671.16	61.16	1039.72
Crop	336.60	5722.20	325.22	5528.74
Import	14.60	248.20	12.00	204.00
TOTAL SUPPLY	390.68	6641.56	398.38	6772.46
DEMAND				
Non-MSME Consumption	197.80	3362.60	204.00	3468.00
MSME Consumption	99.83	1697.11	103.00	1751.00
Non Textile Consumption	16.00	272.00	16.00	272.00
Export	15.89	270.13	28.00	476.00
TOTAL DEMAND	329.52	5601.84	351.00	5967.00

AREA AND PRODUCTION ESTIMATED BY THE COMMITTEE ON COTTON PRODUCTION ON CONSUMPTION ON 24.06.2024

COTTON SEASON 2022-23 AND 2023-24

Area: in Lakh Hectares
Production: in Lakh bales of 170 kg.
Yield: Kg per hectare

State	Area		Production*		Yield	
	2022-23	2023-24 (P)	2022-23	2023-24 (P)	2022-23	2023-24 (P)
Punjab	2.49	2.14	4.44	6.29	303.13	499.67
Haryana	5.75	5.78	10.01	15.09	295.95	443.82
Rajasthan	8.15	10.04	27.74	26.22	578.63	443.96
Total North Zone	16.39	17.96	42.19	47.60	437.60	450.56
Gujarat	24.84	26.83	87.95	90.60	601.91	574.06
Maharashtra	41.82	42.34	83.16	80.45	338.05	323.02
Madhya Pradesh	5.95	6.30	14.33	18.01	409.43	485.98
Total Central Zone	72.61	75.47	185.44	189.06	434.17	425.87
Telangana	19.73	18.18	57.45	50.80	495.01	475.03
Andhra Pradesh	7.04	4.22	15.41	7.25	372.12	292.06
Karnataka	9.49	7.39	25.68	20.47	460.02	470.89
Tamil Nadu	1.73	1.30	3.19	2.78	313.47	363.54
Total South Zone	37.99	31.09	101.73	81.30	455.23	444.55
Odisha	2.16	2.16	7.05	7.05	554.86	554.86
Others	0.12	0.12	0.19	0.21	269.17	297.50
All-India	129.27	126.80	336.60	325.22	442.65	436.02

P= Provisional

* - Including state-wise loose cotton production

The Cotton Corporation of India (CCI):

CCI was established on 31st July 1970 under the administrative control of Ministry of Textiles, Government of India as a Public Sector Undertaking under the Companies Act 1956.

Function of CCI:

The role and function of CCI continued to enlarge with the changing cotton scenario in the country. Now, the **major role of the CCI is to undertake price support operations, whenever the market prices of kapas fall below the minimum support prices (MSP)** announced by Govt. of India, without any quantitative limit.

Besides MSP operations, to fulfil the raw material requirement of the domestic textile industry particularly for lean season, **CCI undertakes commercial purchase operations.**

Cotton is a plant that needs a long frost-free period, a lot of heat and plenty of sunshine. It prefers warm and humid climate. Cotton seeds will have a small germination rate, if the soil temperature is below 60°F (15°C). During active growth, the ideal air temperature is 70 to 100°F (21-37°C).

CA58. 14th edition of the ‘Secretariat Reforms’ report

News:

Ministry of Personnel, Public Grievances & Pensions

14th edition of the ‘Secretariat Reforms’ report released, for May 2024

Department of Administrative Reforms and Public Grievances (DARPG) under Ministry of Personnel, Public Grievances and Pensions published the 14th edition of the monthly report on “Secretariat Reforms” for May 2024 with detailed analysis under 3 initiatives

- (i) Increasing Efficiency in Decision Making
- (ii) Swachhta Campaign
- (iii) Reducing Pendency to Minimum Levels.

But here I want you to learn more regarding function of DARPG:

- a. The **Ministry of Personnel, Public Grievances and Pensions acts as** the formulator of policies pertaining to recruitment, regulation of service conditions, and deputation of personnel besides advising all organizations of the Central Government on issues pertaining to personnel management.
- b. To achieve the objective of upliftment and welfare of the Scheduled Castes and Scheduled Tribes, Other Backward Classes and Persons with Disabilities and Economically Weaker Sections (EWS); **the Department frames policies to provide reservation to these groups in various Central Government services and for monitoring its implementation.**
- c. This **Department is responsible for the management of the cadres of All India Services** (AIS) (IAS, IPS, and IFoS) and all three Secretariat Services namely Central Secretariat Services (CSS), Central Secretariat Stenographers’ Services (CSSS) and Central Secretariat Clerical Services (CSCS).
- d. The Department deals with appointments at senior level and personnel policies of the Government of India. All proposals for senior appointments under the Government of India, which require the approval of the Appointments Committee of the Cabinet (ACC), **are processed by the Department.**
- e. **Lal Bahadur Shastri National Academy of Administration (LBSNAA), Mussourie, Uttarakhand and Institute of Secretariat Training and Management (ISTM), New Delhi** are two premier training institutions, attached to this Department. These institutions cater to the needs of human resource development by imparting training to all officers of Central Government and AIS at regular intervals for their career progression.

CA59. National Eligibility cum Entrance Test (NEET).

Background:

The unexpected postponement of NEET (PG) 2024 just hours before it was scheduled to take place left thousands of aspiring medical students in shock and uncertainty.

This postponement comes amidst the cancellation of the UGC-NET 2024 exam held on 18 June 2024 and ongoing protests over discrepancies in NEET (UG) exam results.

In response to these concerns, the Ministry of Education announced on 22 June 2024 the formation of a seven-member panel to oversee the conduct of examinations through the National Testing Agency (NTA). **The panel, headed by former Indian Space Research Organisation (ISRO) chief K. Radhakrishnan**, has been tasked with ensuring that future exams are conducted transparently, smoothly, and fairly.

About NEET:

NEET was first introduced in 2013 by the Medical Council of India (MCI) but was struck down for violating the provisions of Articles 19(1)(g), 25, 26(a), 29(1) and 30(1) by the apex court in a 2-1 judgement in *Christian Medical College, Vellore & Ors. vs. Union of India & Ors.*

When this judgement was challenged, a five-judge bench was formed in 2016 to hear the review petitions, which almost recalled the original judgement, without stating reasons in details for the same. **From 2017 onwards, NEET became the sole entrance exam for undergraduate medical and dental admissions, replacing the All-India Pre-Medical Test (AIPMT) and other state-level tests.**

As per Section 14 of the National Medical Commission Act, 2019 (NMC Act), the NEET (UG) is mandated as a standardized and uniform entrance examination for admission to undergraduate medical programs across all medical institutions in India.

Section 14. National Eligibility-cum-Entrance Test.

[Previous](#) | [Next](#)

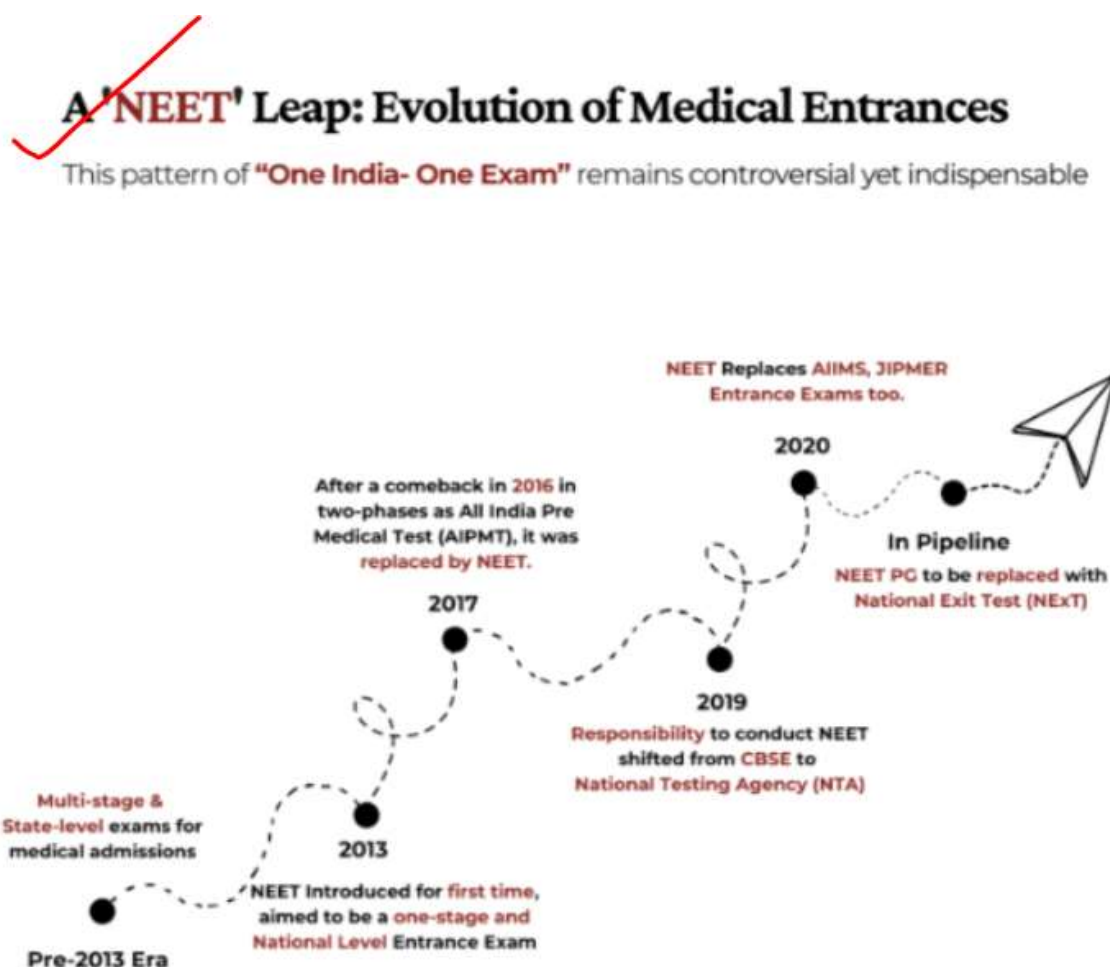
(1) There shall be a uniform National Eligibility-cum-Entrance Test for admission to the undergraduate and postgraduate super-speciality medical education in all medical institutions which are governed by the provisions of this Act:

Provided that the uniform National Eligibility-cum-Entrance Test for admission to the undergraduate medical education shall also be applicable to all medical institutions governed under any other law for the time being in force.

Similarly, Section 14 of the National Commission for Indian System of Medicine Act, 2020, **requires a uniform NEET (UG) for admission to undergraduate courses in disciplines such as Bachelor of Ayurvedic Medicine and Surgery (BAMS), Bachelor of Unani Medicine and Surgery (BUMS), and Bachelor of Siddha Medicine and Surgery (BSMS)**, covering all medical institutions under this act.

Additionally, NEET (UG) is also required for admission to the BHMS course as stipulated by the National Commission for Homeopathy.

Further, the NMC Act established NEET as the sole entrance exam for all medical colleges, including prestigious institutions like AIIMS and JIPMER.



National Testing Agency envisioned as a Premier Testing Agency

The National Testing Agency (NTA) was established by the Government as a premier, autonomous, and self-sustained testing organization to oversee entrance exams for admissions and fellowships in higher educational institutions across India. This system is aimed to benefit students by reducing the need for multiple exams for activities such as engineering admissions.

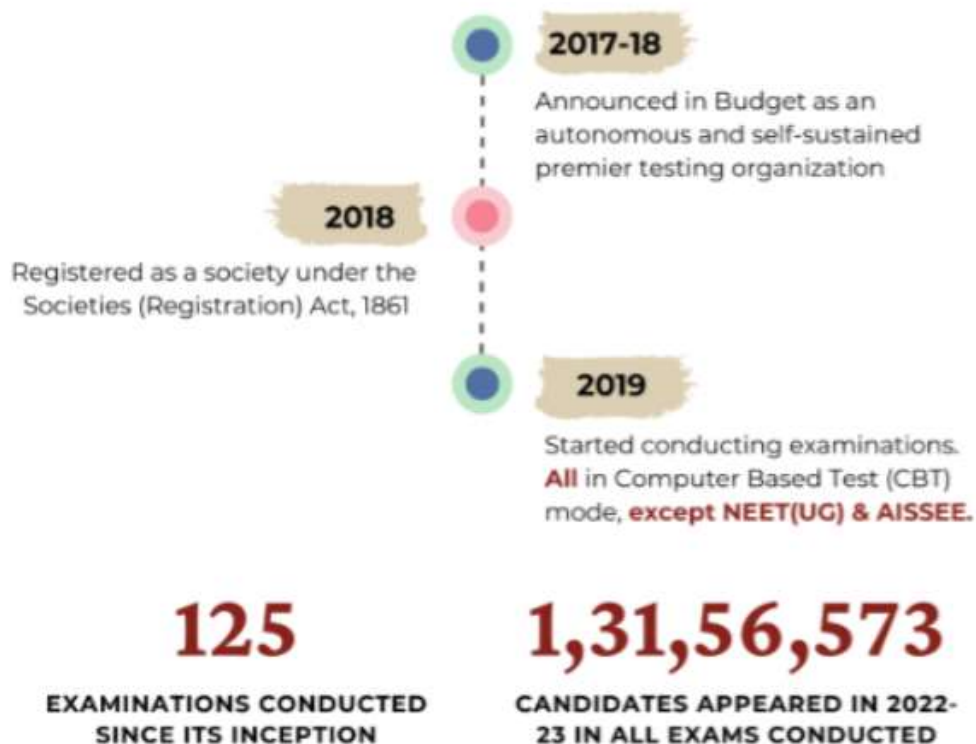
Following Cabinet approval on 10 November 2017, NTA was registered as a Society on 15 May 2018, under the Societies Registration Act of 1860.

Since its inception, NTA has conducted 125 exams. In the fiscal year 2022-23 alone, it administered 26 exams, primarily in a Computer Based Test (CBT) format, except for NEET (UG) and All India Sainik Schools Entrance Exam (AISSEE), which were conducted using pen and paper.

The NEET exam's administration shifted from the Central Board of Secondary Education (CBSE) to the National Testing Agency (NTA) in 2019. Despite the trend towards computer-based exams, NEET remains an OMR-format test conducted in 13 languages (in 2024), including English and Hindi.

NTA's Journey as India's Premier Testing Agency

Envisioned to transform India's Examination landscape



CA60. ULLAS – Nav Bharat Saaksharta Karyakram

News:

Lieutenant Governor of Ladakhon 24 June 2024 **declared Ladakh as the administrative unit to achieve Full Functional Literacy under the ULLAS – Nav Bharat Saaksharta Karyakram**, after having achieved more than 97% literacy.

Read from original document:

~~About~~ ULLAS

Government of India has approved a new Centrally Sponsored Scheme “ULLAS for the period FYs 2022-2027 to cover all the aspects of Education For All (erstwhile termed as Adult Education) to align with National Education Policy 2020 and Budget Announcements FY 2021-22. To enable increased access of resources, online modules covering the entire gamut of adult education will be introduced.

The objectives of the scheme is to impart not only Foundational Literacy and Numeracy but also to cover other components which are necessary for a citizen of 21st century such as

1. **Critical Life Skills** (including financial literacy, digital literacy, commercial skills, health care and awareness, child care and education, and family welfare);
2. **Vocational Skills Development** (with a view towards obtaining local employment);
3. **Basic Education** (including preparatory, middle, and secondary stage equivalency) and
4. **Continuing Education** (including engaging holistic adult education courses in arts, sciences, technology, culture, sports, and recreation, as well as other topics of interest or use to local learners, such as more advanced material on critical life skills).

Important feature:

1. The scheme will be **implemented through volunteerism through online mode**.
2. Trainings, orientations, workshops of volunteers will be organized through **face-to-face mode**.
3. All material and resources **shall be provided digitally for easy access to registered volunteers** through easily accessible digital modes, viz, TV, radio, cell phone-based free/open-source Apps/portals, etc.
4. **The scheme will cover non-literates of the age group of 15 years and above in all state/UTs in the country.**
5. **The financial outlay of “ULLAS” is Rs.1037.90 crore which includes Central share of Rs.700 crore and State share of Rs.337.90 crore respectively.**
6. **School will be Unit** for implementation of the scheme.
7. **Priority will be given in terms of categories** to the girls and women, SC/ST/OBC/Minorities, Persons with Special Needs (Divyangjans), Marginalized/ Nomadic/ Construction workers/ laborers/etc.

As a progressive step, it has also been decided that from now onwards the term “Education For All” will be used in place of “Adult Education” by the Ministry in view of the fact that the terminology “Adult Education” is not incorporating appropriately all non-literates of 15 years and above age group. The term ‘Adult Education’ implies coverage of adults/elders/old age people generally. Accordingly, the terminology “Education for All” may henceforth be used in place of ‘Adult Education’.

CA61. Srinagar recognised as a ‘World Craft City’ by the World Craft Council (WCC)

News:

Srinagar's 'World Craft City' tag, allows Kashmir to re-connect globally

Saleem Beg, head of the Indian National Trust for Art and Cultural Heritage-Kashmir (INTACH-K), described the honour as “the latest recognition of the skill base of Kashmir”

Updated – June 25, 2024 06:53 am IST Published – June 25, 2024 02:53 am IST – SRINAGAR

Srinagar has become the fourth Indian city to be recognised as a 'World Craft City' by the World Craft Council (WCC). Jaipur, Malappuram and Mysore are the other Indian cities that have previously been recognised as World Craft Cities.

In 2021, Srinagar also earned the title of UNESCO Creative City under Crafts and Folk Art.

About:

The **WCC-World Craft City Programme**, a groundbreaking initiative launched in 2014 by the World Crafts Council AISBL (WCC-International) in recognition of the pivotal role local authorities, craftspeople, and communities play in cultural, economic, and social development worldwide.

Objectives of World Craft Council:



Preservation & Promotion

Foster the preservation, promotion, and advancement of traditional crafts globally by providing resources, support, and platforms for artisans.



Empowerment of Artisans

Empower artisans through encouragement, assistance, and guidance, enhancing their skills, livelihoods, and overall well-being.



Cultural Exchange

Facilitate cultural exchange through conferences, international visits, research studies, lectures, workshops, exhibitions, and other collaborative activities that promote cross-cultural understanding and appreciation.



Recognition & Knowledge

Work towards broader recognition and knowledge of craftspeople's work, acknowledging the diverse cultural and national backgrounds and traditions of our members.



Consultation & Collaboration

Actively engage with governments, national and international institutions, societies, and individuals to strengthen the status of crafts in cultural and economic life.

In this year 2024, the **World Crafts Council AISBL organization marks its 60th Anniversary** and is proud to have successfully reached across the five (5) Geographical regions it represents: Africa, Asia Pacific, Europe, Latin America and North America.

About WCC:

The **WCC is affiliated to UNESCO.**

The **WCC was founded in 1964 by Kamaladevi Chattopadhyay** and Aileen Osborn Webb. The WCC (Europe) meets once a year and the 2011 meeting was held in Dublin, Ireland.

The **World Crafts Council meets every four years.**

CA62. Pushpak, ISRO's reusable launch vehicle

News:



The Indian Space Research Organisation (ISRO) has proudly achieved a third consecutive success in the Reusable Launch Vehicle (RLV) Landing EXperiment (LEX) on June 23, 2024.

Following the success of the RLV LEX-01 and LEX-02 missions, RLV LEX-03 re-demonstrated the autonomous landing capability of the RLV under more challenging release conditions (cross range of 500 m against 150 m for LEX-02) and more severe wind conditions.

The winged vehicle, **named 'Pushpak'**, was released from an Indian Air Force Chinook Helicopter at an altitude of 4.5 km. From a release point 4.5 km away from the runway, Pushpak autonomously executed cross-range correction manoeuvres, approached the runway and performed a precise horizontal landing at the runway centreline.



RLV-LEX mission profile | ISRO

What an RLV is?

ISRO's RLV-TD (technology demonstrator) is one of the most challenging endeavours towards developing essential technologies for a fully reusable launch vehicle to enable low-cost access to space.

The configuration of RLV-TD is similar to that of an aircraft and combines the complexity of both the launch vehicle and the aircraft.

The winged RLV-TD — configured to act as a flying test bed to evaluate various technologies, including hypersonic flight, autonomous landing and powered cruise flight — will be scaled up in the coming years to become the first stage of India's reusable two-stage orbital launch vehicle.

The RLV-TD, however, is not the first such launch vehicle. Government and private players worldwide have experimented with partial and fully reusable technology for their launchers for cost-effectiveness and efficiency.

CA63. Pune astronomers identify Kathryn's Wheel

News:

Science

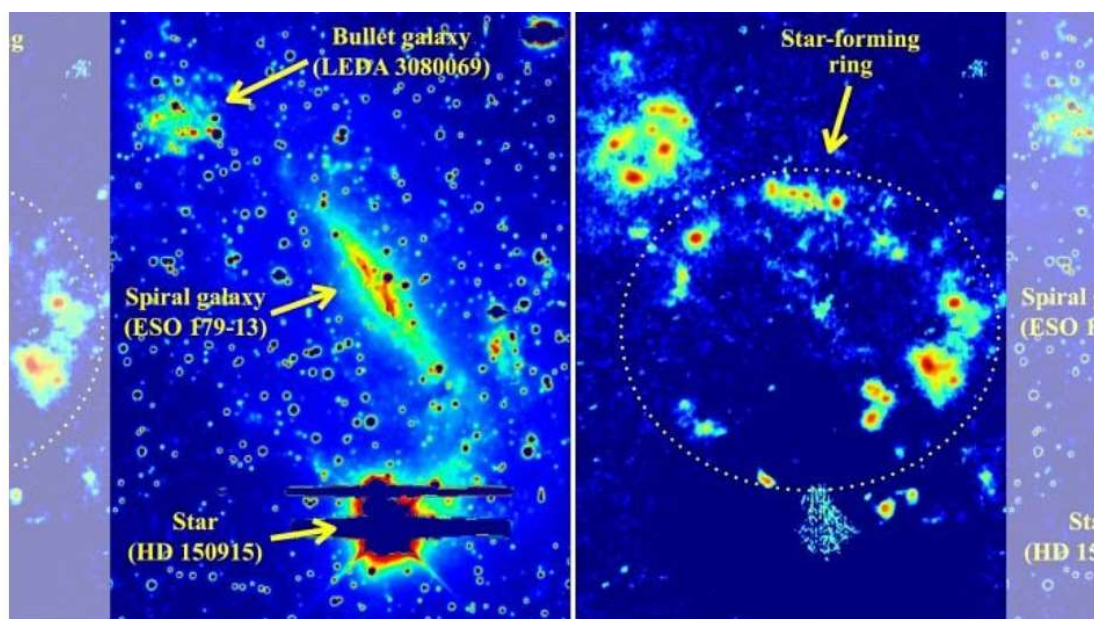
Pune astronomers identify galaxy in Milky Way's neighbourhood as 'explosive factory' of gamma rays

Kathryn's Wheel was formed due to collision of 2 galaxies, but study published in The Astrophysical Journal Letters notes that star formation alone doesn't explain gamma ray emission.

SANDHYA RAMESH 13 June, 2024 02:52 pm IST

Astronomers from Pune's Inter-University Centre for Astronomy and Astrophysics have identified a galaxy, known as Kathryn's Wheel, as "an explosive factory" of gamma rays of unidentified origin.

Located some 30 million light years from the Milky Way, **Kathryn's Wheel is one of the rarest kind of galaxies.** It was birthed when two galaxies collided directly into each other with intense star formation activity occurring in their outer layers.



(Left) Optical image of gamma-ray emitting collisional ring galaxy system, Kathryn's Wheel | (Right) Glowing hydrogen gas characteristic of star-forming regions is seen in the H-alpha band image, highlighting the ring of star formation | Inter-University Centre for Astronomy and Astrophysics

The researchers also confirmed that the galaxy categorised as a collisional ring — **was formed, when the smaller galaxy, called ‘bullet’ — pierced through the larger one.** This led to a shock wave that pushed the dust and gas out of the system, leaving behind it a star-forming ring.

Published in the *peer-reviewed journal The Astrophysical Journal Letters*, the analysis revealed that the **data gathered about the collision of the two galactic centres and star formation merely does not explain the amount of the observed gamma ray emission.**

Why it is important to understand the source of gamma rays?

Gamma rays are emanated in the form of relativistic jets — powerful jets of electromagnetic radiation moving at speeds approaching the speed of light — and made up of photons that come from active galactic nuclei, supernovae or explosions of massive stars, and other such high-energy environments.

Hunting the sources of gamma rays and other high-energy astrophysical phenomena is a key problem in research. Understanding astronomical sources that produce these intense energy beams is necessary to know how high-energy particles interact with galactic environments.

Studying these particles is also opening up a new field in physics — the study of neutrinos: exotic, tiny collapsed atoms of dead stars that pass through everything without causing any damage.

Understanding high-energy physics **also helps in furthering research into dark matter and dark energy, which are thought to make up a majority of the known universe.**

CA64. Uttar Pradesh leads in compressed biogas potential (Learn complete about CBG)

News:

Uttar Pradesh leads in compressed biogas potential, but challenges persist: Experts discuss at symposium

State can potentially instal 1,000 CBG plants, shows CSE report, solutions proposed to overcome sector hurdles

Uttar Pradesh has the most advanced bioenergy policy in India and leads in the number of upcoming CBG projects. Of the 128 CBG projects, 15 are operational, while the remaining 113 are in various stages of construction.

Among Indian states, Uttar Pradesh has taken the lead in this sector with its ambitious bioenergy policy, allocating Rs 750 crore (2022-27) for CBG, while providing subsidies, land for lease and other incentives. This symposium has been organised to discuss the challenges faced by CBG producers, share successful practices, highlight opportunities for start-ups, raise awareness among district-level bioenergy committees, and educate farmer-producer bodies on the potential of bioenergy.

Compressed biogas (CBG) offers a multitude of benefits for India: **It can help enhance waste management, promote local clean energy solutions, and bring down our dependence on imported compressed natural gas (CNG).**

Learn about CBG:

Waste / Bio-mass sources like agricultural residue, cattle dung, sugarcane press mud, municipal solid waste and sewage treatment plant waste, etc. produce bio-gas through the process of anaerobic decomposition. The bio-gas is purified to remove hydrogen sulfide (H_2S), carbon dioxide (CO_2), water vapor and compressed as Compressed Bio Gas (CBG), which has methane (CH_4) content of more than 90%.

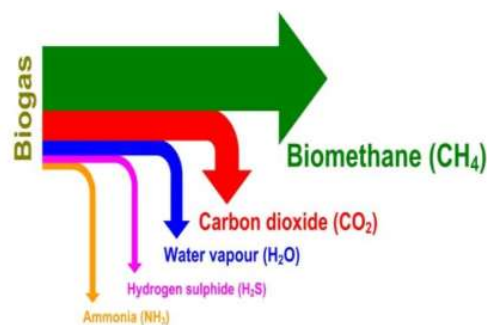


Fig. 1 : Components of biogas

CBG has calorific value and other properties similar to CNG and hence can be utilized as green renewable automotive fuel. Thus it can replace CNG in automotive, industrial and commercial areas, given the abundance biomass availability within the country.

Conversion of agricultural residue, cattle dung and municipal solid waste (MSW) into CBG in a commercial scale is expected to have the following benefits

- Import reduction of natural gas and crude.
- Utilization of agricultural residue, cattle dung and MSW for the production of CBG and thus to achieve reduction in emissions and pollution.
- A boost towards fulfillment of National commitments in achieving climate change goals.
- Providing a buffer against energy security concerns and crude/gas price fluctuations.
- Contribution towards Swachh Bharat Mission through responsible waste management
- Lowering pollution and carbon emission.
- Providing additional source of revenue to the farmers, rural employment and amelioration of the rural economy

✓ CBG Production Technology

1. Biogas is a product from the process of degradation of organic matter by anaerobic bacteria. The biogas generation process consists of four subsequent chemical and biochemical reactions i.e. Hydrolysis reaction, Acidogenesis reaction, Acetogenesis reaction and Methanogenesis reaction.
2. Hydrolysis reaction decomposes organic molecule such as carbohydrates, proteins and fats into glucose, amino acids and fatty acids, respectively. Acidogenesis converts those generated small organic molecules to volatile organic acids with help from bacteria. During the Acetogenesis process, bacteria in the acetic group digests volatile organic acids and releases acetic acid. Lastly, anaerobic bacteria in the methanogenic producing bacteria group will complete the Methanogenesis process by converting acetic acid to methane gas and other gases like carbon dioxide and hydrogen sulfide.
3. Hydrogen sulfide is a corrosive gas. Presence of carbon-dioxide in the bio-gas reduces its calorific value. Hence the bio-gas needs to be purified. Various

Despite these promising statistics, the sector faces significant challenges.

✓ What are the challenges faced by the sector

- **Limited offtake of by-products/bioslurry/fermented organic manure (FOM):** CBG plants generate bioslurry, which can be used as a fertiliser. However, there are no takers for the bioslurry produced by CBG plants. Says Dr Rahul Jain, deputy programme manager, renewable energy, CSE and the author of CSE's report on CBG: "Instead of being considered a potential revenue source, bioslurry is perceived as a disposal challenge. Plant owners are either providing it for free to nearby farmers or disposing of it on vacant lands. There is a lack of awareness about the characteristics of bioslurry, appropriate application methods and potential benefits."
- **Partial gas offtake by oil and gas marketing companies:** These companies acquire gas from CBG plants on a 'best-endeavour' basis, depending on market demand. This exposes plant owners to the risk of being unable to sell their entire gas production. Some plants are operating below their capacity because they cannot fully offload their gas. The absence of CNG gas pipelines near plant locations is another challenge faced by these facilities. It has been noted that gas transport through cascades is a viable option for plants with capacities below 5 tonne per day (TPD); for anything above this threshold, the most effective offtake model is through gas pipelines.
- **Shortage of skilled technical manpower:** Operational challenges frequently confront functioning plants, resulting in issues like gas leakage, inefficiency and operating below optimal capacity. This arises from a lack of skilled personnel who have adequate understanding of biogas production systems and plant operations.
- **Financing issues:** Banks rarely show any interest in financing CBG projects — their concerns revolve around risks, low margins and the non-standardised nature of the industry. Banks commonly require high collateral as a standard practice, and interest rates start at a minimum of 11.5 per cent. Moreover, lending institutions lack the capacity to evaluate CBG proposals, which hampers the decision-making process.

CA65. Renaming of states: Kerala to 'Keralam'

News:

✓ Kerala Assembly passes resolution to rename State as 'Keralam'

Similar resolution passed in 2023 had been returned by the Centre citing procedural issues

Updated – June 24, 2024 04:45 pm IST Published – June 24, 2024 04:29 pm IST – THIRUVANANTHAPURAM

The renaming of states is governed by Article 3 of the Constitution of India. The Article empowers the Parliament to alter the name of any State by law.

3. Formation of new States and alteration of areas, boundaries or names of existing States.—Parliament may by law—

(a) form a new State by separation of territory from any State or by uniting two or more States or parts of States or by uniting any territory to a part of any State;

(b) increase the area of any State;

(c) diminish the area of any State;

(d) alter the boundaries of any State;

(e) alter the name of any State:

¹[Provided that no Bill for the purpose shall be introduced in either House of Parliament except on the recommendation of the *Agmt*

The procedure for the same is as follows:

1. The renaming of a state requires Parliamentary approval under Article 3 and 4 of the Constitution.
2. A bill for renaming a state may be introduced in the Parliament on the recommendation of the President.
3. Before the introduction of the bill, the President shall send the bill to the respective state assembly for expressing their views within a stipulated time. The views of the state assembly are not binding, neither on the President nor on the Parliament.
4. On the expiry of the period, the bill will be sent to the Parliament for deliberation. The bill to take the force of a law must be passed by a simple majority.
5. The Bill is passed in each House (Lok Sabha and Rajya Sabha) by a majority of total membership of the House with 2/3 members present and voting
6. President gives his assent to the Bill
7. The change in name of the state is recorded in First and Fourth Schedule of the Constitution (Schedule containing the names of states)
8. **No such law as aforesaid shall be deemed to be an amendment of this Constitution for the purposes of article 368.**

The process for changing the name of a state can also be initiated by state legislature.

To initiate the process, the state assembly would first pass a resolution for such change in name and this passed resolution would be sent to central government. The Central Government will then create a bill and this bill will be sent back to the state legislature to express its views in a stipulated time.

Following the said procedure in 2010, the name of Orissa was changed to Odisha, by passing of the Odisha (Alteration of Name) Bill, 2010. Recently, The Kerala Legislative Assembly, in a unanimous decision on June 24, passed a resolution proposing a Constitutional amendment to change the name of the State from 'Kerala' to 'Keralam'.

However, the central government refused to introduce a Bill to the effect. While, many have termed this a political tactic, one should note, that the government's refusal is constitutional as under Article 3, the decision to introduce a Bill to the effect, is discretionary.

CA65. Global Energy Transition Index 2024: World Economic Forum

News:



Published: 19 June 2024

Fostering Effective Energy Transition 2024

The index is released by World Economic Forum.

The Energy Transition Index (ETI), **which benchmarks 120 countries on their current energy system performance** and on the readiness of their enabling environment, finds that while there has been notable progress in energy efficiency and a marked increase in the adoption of clean energy sources, energy transition momentum has been held back by setbacks in energy equity, driven by rising energy prices in recent years.

FIGURE 2 Energy Transition Index framework

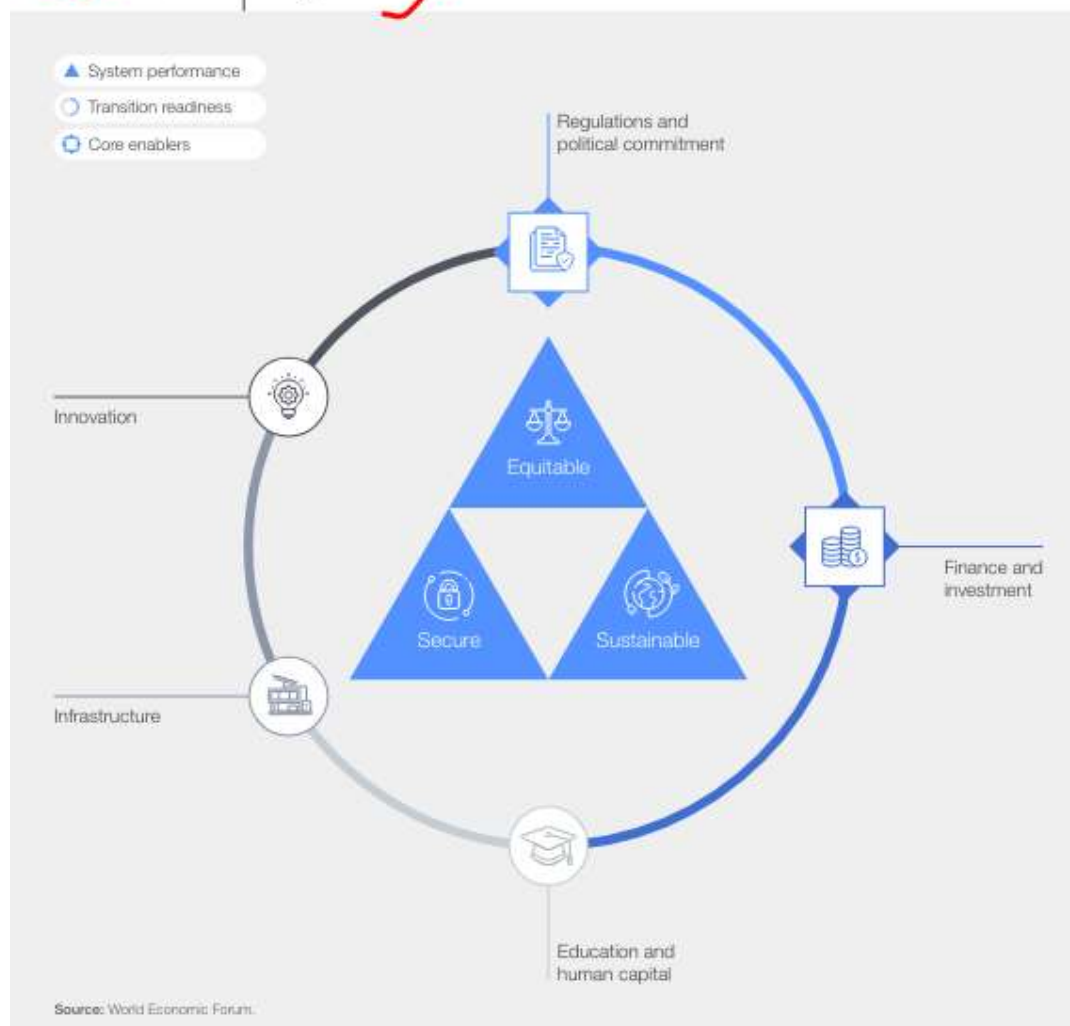


TABLE 1 ETI 2024 ranking table

Rank	Country	ETI score (2015–2024)	2024 ETI score	SP ¹ ('24)	TR ² ('24)	Rank	Country	ETI score (2015–2024)	2024 ETI score	SP ¹ ('24)	TR ² ('24)
1	Sweden	78.4	78.4	79.4	76.8	61	Malta	55.6	55.6	64.9	41.8
2	Denmark	75.2	75.2	72.0	80.1	62	Oman	55.5	55.5	58.9	50.3
3	Finland	74.5	74.5	70.7	80.1	63	India	55.3	55.3	63.6	42.8
4	Switzerland	73.4	73.4	76.2	69.1	64	Singapore	55.0	55.0	54.1	56.5
5	France	71.1	71.1	74.7	65.6	65	Morocco	54.9	54.9	60.5	46.5
6	Norway	69.9	69.9	75.2	62.0	66	Bolivia	54.8	54.8	68.1	34.7
7	Iceland	68.0	68.0	71.8	62.2	67	Montenegro	54.6	54.6	59.9	46.6
8	Austria	67.9	67.9	68.5	67.0	68	Namibia	54.5	54.5	62.0	43.3
9	Estonia	67.8	67.8	73.7	59.0	69	Sri Lanka	54.2	54.2	64.4	39.0
10	Netherlands	66.7	66.7	62.7	72.7	70	Kenya	53.6	53.6	63.8	38.4

What report talks about India?

✓ Meanwhile, India has made strides in its clean energy infrastructure, with renewable energy and biomass comprising 42% of its power generation capacity,²⁸ making it the fourth-largest renewables market globally. With annual investments nearing \$10 billion, India is driving the adoption of electric vehicles (EVs) and the production of green hydrogen.²⁹ However, the significant dependence on coal in both China and India continues to be a major factor in their emission intensity.³⁰

development goals. The prevalent notion of a linear correlation between economic growth and energy requirements no longer holds true. India's per capita emissions, at 1.7 tonnes of CO₂, are already 60% lower than the global average of 4.4 tonnes of CO₂ per capita. However, there is still a need to decouple growth from energy demand. This requires significant investment in energy efficiency, particularly during the development of new infrastructure and manufacturing capacity. India has been taking multiple initiatives in this regard. The Indian government's UJALA⁷⁴ scheme launched in 2015⁷⁵ is the world's largest domestic lighting project to replace energy-inefficient incandescent bulbs and demonstrates how small actions can add up to gigantic outcomes, in this case abating approximately 40 million tonnes of CO₂ annually.

CA66. AlphaFold-Explained.

Try to understand the basic, why AlphaFold?

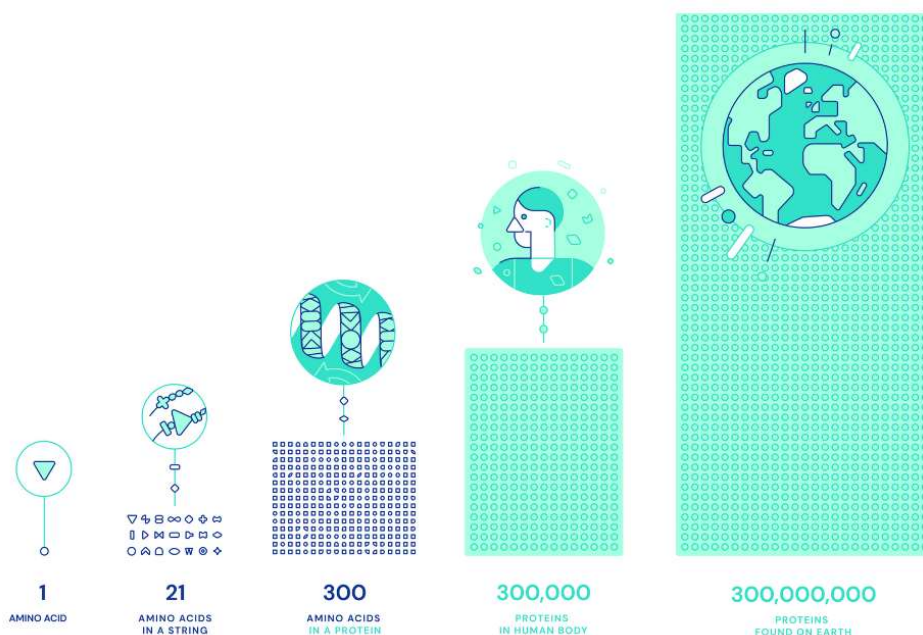
Background:

Currently, there are over 200 million known proteins, with many more found every year. Each one has a unique 3D shape determining how it works and what it does.

But figuring out the exact structure of a protein can sometimes take years and hundreds of thousands of dollars, meaning scientists were only able to study a tiny fraction of them. **This slowed down research to tackle disease and find new medicines.**

The protein-folding problem

If you could unravel a protein, you would see that it's like a string of beads made of a sequence of different chemicals known as amino acids. These sequences are assembled according to the genetic instructions of an organism's DNA.



Experimental methods to determine the structure of proteins include nuclear magnetic resonance and X-ray crystallography. **These rely on extensive trial and error, years of painstaking work, and multi-million-dollar specialized equipment.**

So, for decades, scientists tried to find a method to reliably determine a protein's structure from its sequence of amino acids alone. **This grand scientific challenge is known as the protein-folding problem.**

THE SOLUTION:

Things changed when **Google DeepMind's protein-structure prediction software AlphaFold** burst into the scene in 2020. They changed more drastically in 2021 with the highly improved AlphaFold 2.

AlphaFold uses machine learning and artificial intelligence (AI) to accurately predict protein structures from an amino acid sequence, seemingly solving the protein-folding problem without learning any of the deeper physical principles that drive this biological process.

In 2024, AlphaFold 3 was introduced, which predicts the structure and interactions of all of life's molecules.

AlphaFold 3 goes beyond proteins to a broad spectrum of biomolecules including DNA, RNA, and even small molecules, also known as ligands, which encompass many drugs. This leap could unlock more transformative science, from developing bio renewable materials and more resilient crops, to accelerating drug design and genomics research.

CA67. Paraguay Becomes 100th Member of International Solar Alliance

News:



Learn about ISA:

Launched on 30 November 2015 by Prime Minister Shri Narendra Modi and President of France, H.E. Mr. Emmanuel Macron during COP21 in Paris, the ISA aims to accelerate the deployment of solar energy globally in support of Climate Action.

Headquartered in India, the ISA has now brought together several countries to collectively address barriers related to technology, finance, and capacity in scaling up solar energy.

The **ISA is guided by its 'Towards 1000' strategy** which aims to mobilise USD 1,000 billion of investments in solar energy solutions by 2030, while delivering energy access to 1,000 million people using clean energy solutions and resulting in installation of 1,000 GW of solar energy capacity.

This would help mitigate global solar emissions to the tune of 1,000 million tonnes of CO2 every year.

✓ Each Member designates a National Focal Point for the ISA. National Focal Points constitute a permanent network of correspondents of the ISA in Member countries. They inter alia interact with one another and also with relevant stakeholders to identify areas of common interest, design Programmes proposals and make recommendations to the Secretariat regarding the implementation of the objectives of the ISA.

✓ The Assembly makes all necessary decisions regarding the functioning of the ISA, including the selection of the Director General and approval of the operating budget.

Each Member has one vote in the Assembly. Observers and Partner organizations may participate without having right to vote. Decisions on questions of procedure are taken by a simple majority of the Members present and voting. Decisions on matters of substance are taken by two-third majority of the Members present and voting. Decisions regarding specific Programmes are taken by Members participating in this Programme.

Amendments and withdrawal

✓ Any Member may propose amendments to the Framework Agreement after expiry of one year from the commencement of the Framework Agreement.

Amendments to the Framework Agreement shall be adopted by the Assembly by two thirds majority of the Members present and voting. The amendments shall come into force when two thirds of the Members convey acceptance in accordance with their respective constitutional processes.

- Operating costs of the Secretariat and Assembly, and all costs related to support functions and cross-cutting activities, form the budget of the ISA. They are covered by:
- Voluntary contributions by its Members, UN & its agencies and other countries;
 - Voluntary contributions from private sector. In case of a possible conflict of interest, the Secretariat refers the matter to the Assembly for approval of the acceptance of the contribution;
 - Revenue to be generated from specific activities approved by the Assembly.

Member Country status

- Membership is open to States which are members of the United Nations. Such States become Members of the ISA by having signed this Agreement and having deposited an instrument of ratification, acceptance or approval.

CA68. India-UAE Trade

Few important points:

- India is UAE's second-largest trading partner** accounting for 9% of its total foreign trade and 14% of non-oil exports. Also, the UAE is India's third biggest trade partner.
- India-UAE trade has increased from US\$ 180 million per year in the 1970s to US\$ 84.84 billion in FY23.
- India and UAE bilateral trade worth US\$ 84.84 billion during 2022-23. After the USA and China, **UAE became India's third largest trading partner and India's second-largest export destination.**
- UAE is the 7th largest investor in India** with cumulative FDI inflows of US\$ 16.67 billion from April 2000-September 2023.
- The UAE is home to 3.5 million Indians (30% of the Emirate's population).** Indians are the largest expatriate community in the UAE, and their remittances are a significant source of foreign earnings.

Major exported items from India to UAE include **gems and jewellery (US\$ 4.82 billion) followed by petroleum products (US\$ 3.95 billion), engineering goods (US\$ 3.423 billion), electronic goods (US\$ 2.15 billion)** and others (US\$ 1.48 billion), etc. during April-November 2023.

Major imported items by India from UAE include **pearl, precious and semi-precious stones (US\$ 11.16 billion), petroleum products (US\$ 9.84 billion), plastic and articles thereof (US\$ 1.20 billion), bulk minerals and ores (US\$ 679 million), tanning or dyeing extracts (US\$ 652 million)** during April-November 2023.

India-UAE Comprehensive Economic Partnership Agreement (CEPA):

Since entering into force on **1 May 2022**, the CEPA has played a crucial role in elevating the UAE-India bilateral relationship to new heights.

If you see India-UAE trade:

Country / Region: U ARAB EMTS

S.No.	Year	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024
1.	EXPORT	20,423,782.22	12,333,391.82	20,915,828.49	25,385,238.28	29,509,524.29
2.	%Growth		-39.61	69.59	21.37	16.25
3.	India's Total Export	221,985,418.10	215,904,322.13	314,702,149.28	362,154,987.57	361,929,187.01
4.	%Growth		-2.74	45.76	15.08	-0.06
5.	%Share	9.20	5.71	6.65	7.01	8.15
6.	IMPORT	21,444,701.89	19,635,053.70	33,446,980.04	42,740,563.67	39,776,370.94
7.	%Growth		-8.44	70.34	27.79	-6.94
8.	India's Total Import	336,095,445.61	291,595,770.04	457,277,458.91	574,980,127.11	559,287,670.24
9.	%Growth		-13.24	56.82	25.74	-2.73
10.	%Share	6.38	6.73	7.31	7.43	7.11
11.	TOTAL TRADE	41,868,484.12	31,968,445.53	54,362,808.52	68,125,801.95	69,285,895.23
12.	%Growth		-23.65	70.05	25.32	1.70
13.	India's Total Trade	558,080,863.71	507,500,092.17	771,979,608.19	937,135,114.68	921,216,857.25
14.	%Growth		-9.06	52.11	21.39	-1.70
15.	%Share	7.50	6.30	7.04	7.27	7.52
16.	TRADE BALANCE	-1,020,919.67	-7,301,661.88	-12,531,151.55	-17,355,325.39	-10,266,846.65

CA69. Financial Action Task Force (FATF)

News:

Ministry of Finance

FATF adopts Mutual Evaluation Report of India in its June 2024 Plenary held in Singapore

India has achieved an outstanding outcome in the Mutual Evaluation conducted during 2023-24 by Financial Action Task Force (FATF). **The report places India in the 'regular follow-up' category, a distinction shared by only four other G20 countries. This marks a significant milestone in the nation's efforts to combat money laundering (ML) and terrorist financing (TF).**

Among other things, FATF has recognised the efforts made by India on:

- Mitigating the risks arising from ML/TF, including the laundering of proceeds from corruption, fraud, and organised crime.
- Effective measures implemented by India to transition from a cash-based to a digital economy to reduce ML/TF risks.
- Implementation of the JAM (Jan Dhan, Aadhaar, Mobile) Trinity, along with stringent regulations on cash transactions, has led to a significant increase in financial inclusion and digital transactions; these measures have made transactions more traceable, thereby mitigating ML/TF risks and enhancing financial inclusion.

About FATF:

The Financial Action Task Force (FATF) is the global money laundering and terrorist financing watchdog. The **inter-governmental body sets international standards that aim to prevent these illegal activities and the harm they cause to society.**

As a policy-making body, the FATF works to **generate the necessary political will to bring about national legislative and regulatory reforms in these areas.**

History of the FATF

In response to mounting concern over money laundering, the **Financial Action Task Force on Money Laundering (FATF) was established by the G-7 Summit that was held in Paris in 1989.**

Every year, FATF holds three meetings of its central decision-making body, the plenary, where all the 37 member jurisdictions and two regional organisations (**EU and GCC, Gulf Cooperation Council and the European Commission**) approve the outcomes **through consensus**.

India became a member of FATF in 2010.

The FATF currently comprises 37 member jurisdictions and 2 regional organisations, representing most major financial centres in all parts of the globe.

>> **FATF Heads of Delegation**

Argentina	France	Japan	Russian Federation
Australia	Germany	Republic of Korea	Saudi Arabia
Austria	Greece	Luxembourg	Singapore
Belgium	Gulf Co-operation Council	Malaysia	South Africa
Brazil	Hong Kong, China	Mexico	Spain
Canada	Iceland	Netherlands, Kingdom of	Sweden
China	India	New Zealand	Switzerland
Denmark	Ireland	Norway	Türkiye
European Commission	Israel	Portugal	United Kingdom
Finland	Italy		United States

In October 2001, the FATF expanded its mandate to incorporate efforts to combat terrorist financing, in addition to money laundering. In April 2012, it added efforts to counter the financing of proliferation of weapons of mass destruction.

Starting with its own members, **the FATF monitors countries' progress in implementing the FATF Recommendations; reviews money laundering and terrorist financing techniques and counter-measures; and, promotes the adoption and implementation of the FATF Recommendations globally.**

The FATF's decision making body, the FATF Plenary, **meets three times per year.**

What are FATF's 'black' and 'grey' lists?

The FATF holds countries to account that do not comply with the FATF Standards. If a country repeatedly fails to implement FATF Standards then it can be named a Jurisdiction under Increased Monitoring or a High-Risk Jurisdiction. **These are often externally referred to as “the grey and black lists”.**

These terms do not exist in official FATF terminology but are colloquial phrases used to describe two lists of countries maintained by the body.

The 'black list' is the term used for FATF's list of “High-Risk Jurisdictions subject to a Call for Action”. Currently, North Korea, Iran and Myanmar are on the 'black list. These countries are deemed to have “**significant strategic deficiencies**” in their financial regimes that make them risky to be part of the larger international financial system, with countermeasures applied against them.

The second public list is of countries with “strategic deficiencies” in their regime to counter money laundering and terror financing. Once listed as 'jurisdiction under increased monitoring' by FATF, they must complete an action plan within a specific period. **This one is colloquially referred to as the 'grey list.'**

FATF does not ask its members to take additional “due diligence” measures against the ‘grey list countries” but encourages states “to take into account the information presented below in their risk analysis”.

The Secretariat is located at the OECD Headquarters in Paris.

CA70. AI Preparedness Index (API)

News:

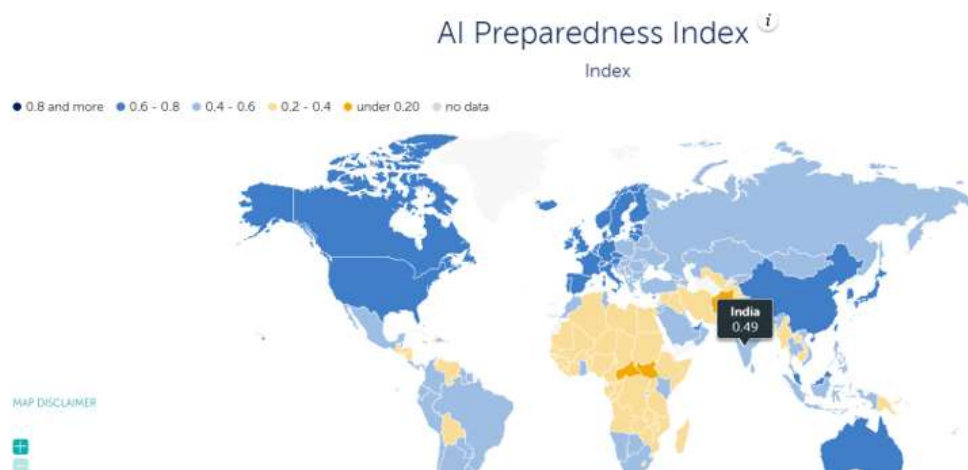
New AI Preparedness Index Dashboard tracks 174 economies based on their digital infrastructure, human capital, labor policies, innovation, integration and regulation

Giovanni Melina

June 25, 2024

The **International Monetary Fund (IMF)** released an **Artificial Intelligence Preparedness Index (API)** Dashboard on their website on June 25, 2024, tracking 174 economies globally for AI readiness.

The Index ranks India at the 72nd position, with Bangladesh (0.38) at 113, Sri Lanka (0.43) at 92, and China (0.63) at 31.



The rating for each country is analysed based on **their digital infrastructure, human capital, labour policies, innovation, integration, and regulation.**

The Index has categorised each country into Advanced Economy (AE), Emerging Market Economy (EM), and Low-Income Country (LIC).

Singapore (0.80), Denmark (0.78), and the United States (0.77) are among the highest-rated AEs, with India categorised as an EM with a 0.49 rating.

CA71. Zero Debris by 2030 approach by ESA

News:

Time to build zero-debris satellites

26/06/2024 1889 VIEWS 13 LIKES

On 25 June 2024, three major European space industry players each signed a contract with ESA to develop large low Earth orbit (LEO) satellite platforms that conform to **Zero Debris standards**.

Space debris is defined as “All non-functional, human-made objects, including no longer functioning spacecraft or fragments of them, in orbit or re-entering Earth's atmosphere.”

The **Zero Debris approach** is ESA's **ambitious revision** of its internal space debris mitigation requirements that builds on more than a decade of ESA-wide collaborative work and will drive the development of technologies required **to become debris-neutral by 2030**.

At the Ministerial Conference of 2022, **ESA was encouraged by its Member States to implement “a Zero Debris approach for its missions**



CA72. SAARC Currency Swap Framework for the period 2024 to 2027

News:

June 27, 2024

RBI announces the ~~SAARC~~ Currency Swap Framework for the period 2024 to 2027

First, understand currency swap agreement:

The currency swap agreement between two countries (say A and B) happens at Central Bank Level. Country A gives its currency to country B and country B will give its own currency to country A. And the countries will keep on paying the interest on the currency which they have taken from the other country. And after a fixed period, the swap is again reversed which means country A will get the principal amount from B and country B will get the principal amount of its currency from A.

This is a kind of Standard agreement.

About the news:

The Reserve Bank of India with the concurrence of the Government of India has decided to put in place a revised Framework on Currency Swap Arrangement for SAARC countries for the period 2024 to 2027.

Under this Framework, the **Reserve Bank would enter into bilateral swap agreements with SAARC central banks, who want to avail of the swap facility.**

It may be recalled that the **SAARC Currency Swap Facility came into operation on November 15, 2012** with an intention to provide a backstop line of funding for short term foreign exchange liquidity requirements or balance of payment crises of the SAARC countries till longer term arrangements are made.

Under the Framework for 2024-27, a separate INR Swap Window has been introduced with various concessions for swap support in Indian Rupee.

The total corpus of the Rupee support is ₹250 billion. The RBI will continue to offer swap arrangement in US\$ and Euro under a separate US Dollar/ Euro Swap Window with an overall corpus of US\$ 2 billion.

The Currency Swap Facility will be available to all SAARC member countries, subject to their signing the bilateral swap agreements.

CA73. What is the Enemy Agents Ordinance law?

News:

What is Enemy Agents Ordinance, tough law applicable in Jammu and Kashmir?

The law is more stringent than the Unlawful Activities (Prevention) Act (UAPA) and has the punishment of either a life term or a death sentence.

Recently, Jammu and Kashmir's Director General of Police (DGP) **proposed using the Enemy Agents Ordinance of 2005**, which ***includes penalties such as life imprisonment or the death penalty, to prosecute militant supporters*** instead of the Unlawful Activities Prevention Act (UAPA).

What is the Enemy Agents Ordinance?

The J&K **Enemy Agents Ordinance was first issued in 1917** by the then Dogra Maharaja of J&K. It is referred to as an 'ordinance' since laws made during the Dogra rule were called ordinances.

According to the ordinance, *"whosoever is an enemy agent or, with an intent to aid the enemy, conspires with any other person to any act which is designed or likely to give assistance to the enemy or to impede the military or air operations of Indian forces or to endanger life or is guilty of incendiarism shall be punishable with death or rigorous imprisonment for life or with rigorous imprisonment for a term which may extend to 10 years and shall also be liable to fine".*

After Partition in 1947, the ordinance was incorporated as a law in the erstwhile state and was also amended.

Does law exist after Article 370 was removed?

In 2019, **when Article 370 of the Constitution was repealed**, J&K's legal framework also underwent several changes. The Jammu and Kashmir Reorganisation Act was passed, which listed out state laws that were to continue while several others were repealed and replaced with Indian laws.

While the security laws such as Enemy Agents Ordinance and Public Safety Act remained; the Ranbir Penal Code was replaced with the Indian Penal Code. Other laws including The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 or Forest Act, and The Scheduled Caste and the Scheduled Tribes (Prevention of Atrocities) Act, 1989 were extended to J&K as well.

How are trials conducted under the ordinance?

- The trial under the Enemy Agents Ordinance is conducted by a **special judge who is appointed by the "government in consultation with the High Court"**.
- Under the ordinance, the **accused cannot engage a lawyer** to defend herself unless permitted by the court
- There is no provision for appeal against the verdict**, and the decision of the special judge can only be reviewed "by a person chosen by the Government from the judges of the High Court and the decision of that person shall be final".
- The ordinance also bars any disclosure or publication of the case tried under it.**

There are many Kashmiris who are or have been tried and sentenced under the Enemy Agents Ordinance.

Challenges with the law

Although under the Enemy Agents Ordinance a special designated court has to conduct a trial and a special judge is appointed for this, one challenge is that the J&K High Court has not designated a special judge for the trial of those accused under the law.

"There have been periodic appointments of judges to hear these cases, but at the moment there is no one. The cases under this ordinance hit a wall since the court has not designated a judge for their hearing," a legal expert said.

CA74. UNODC released Annual World Drug Report (2024)

The International Day against Drug Abuse and Illicit Trafficking, or World Drug Day, is marked on 26 June every year to strengthen action and cooperation in achieving a world free of drug abuse.

2024 THEME

"The evidence is clear: invest in prevention"

Key highlights of the report:

Rise in drug abuse: In the decade to 2022, the number of people using illicit drugs increased to 292 million.



Key message

Almost 292 million, or 1 in 18, people used a drug in 2022, 20 per cent more than a decade earlier



Key message

There has been a marked increase in the use of stimulant drugs such as cocaine and “ecstasy” after the COVID-19 pandemic



Key message

Although men account for a far larger share of offences related to drug trafficking and use, women tend to have greater involvement with synthetic drugs than with plant-based drugs and once involved they suffer from higher levels of harm than men



Key message

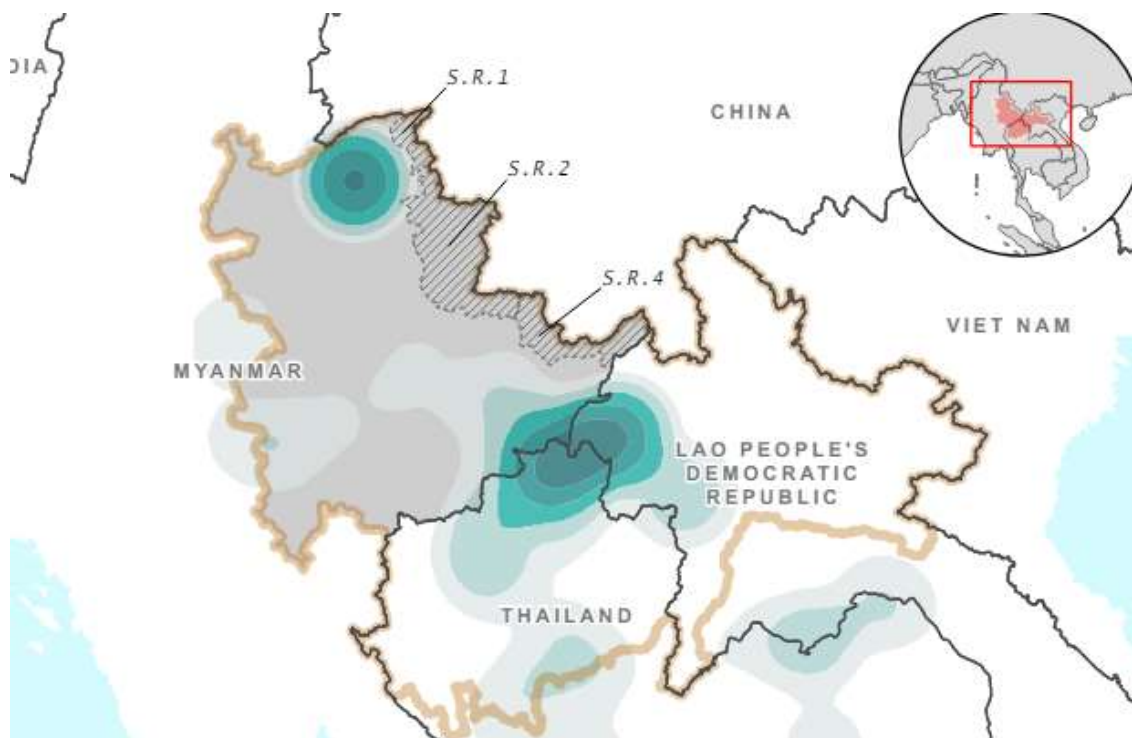
Synthetic drugs bring new challenges to security and public health



Key message

In the Golden Triangle, the intertwined nature of the drug economy, other illegal activities and armed conflict exacerbates human insecurity, destabilizes local communities and negatively affects fragile environments

Golden Triangle (Laos Myanmar and Thailand).



Initiatives against use of illicit drugs:

Global

- a. Commission on Narcotic Drugs (CND) was established by the UN's Economic and Social Council (ECOSOC) resolution in 1946.
- b. UNODC was established in 1997 to address the interrelated issues of drug control, crime and international terrorism in all its forms.

- c. UN Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, 1988.
- d. UN Decade Against Drug Abuse (1991-2000)

India

- a. Nasha Mukh Bharat Abhiyaan (NMBA) by the Ministry of Social Justice and Empowerment.
- b. Narcotic Drugs and Psychotropic Substances Act (NDPS), 1985

One question appeared in 2019: Try to find answer for only third statement.

(Pre19-SetA) Q54. Consider the following statements:

- 1. The United Nations Convention against Corruption (UNCAC) has a "protocol against the smuggling of Migrants by Land, Sea and Air".
- 2. The UNCAC is the **ever-first** legally binding global anti-corruption instrument.
- 3. A highlight of the United Nations Convention against Transnational organized Crime (UNTOC) is the inclusion of a specific chapter aimed at returning assets to their rightful owners from whom they had been taken illicitly.
- ✓ 4. The United Nations office on Drugs and Crime (UNODC) is mandated by its member states to assist in the implementation of both UNCAC and UNTOC.