Goaltide
A Prelims IAS Academy

CURRENT AFFAIRS AUGUST

Goaltide

A Prelims IAS Academy

UPSC PRELIMS 2025 EXAM
CURRENT AFFAIRS AUGUST

www.goaltideias.com | info@goaltideias.com | +91 8512889220

Contents

1. India's Long-Term Low Greenhouse Gas Emission Development Strategies (LT-LEDS)

News:

Ministry of Environment, Forest and Climate Change

Climate action and carbon neutrality

Posted On: 01 AUG 2024 1:04PM by PIB Delhi

India, at the 26th session of the United Nations Framework Convention on Climate Change (UNFCCC) (COP 26) in November 2021, announced its target to achieve net zero by 2070. In pursuance thereof, India formulated and submitted its Long-Term Low Greenhouse Gas Emission Development Strategies (LT-LEDS) to the UNFCCC in November 2022, which reaffirms the goal of reaching net-zero by 2070.

Parties agreed, under Article 4.19 of the Paris Agreement under the UNFCCC "to strive to formulate and communicate long-term low greenhouse gas emission development strategies (LT-LEDS).

19. All Parties should strive to formulate and communicate long-term low greenhouse gas emission development strategies, mindful of Article 2 taking into account their common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.

India's LT-LEDS is based on the principles of equity and climate justice and the principle of Common but Differentiated Responsibilities and Respective Capabilities.

India's LT-LEDS involves seven key strategic transitions, namely:

1. Low carbon development of electricity systems consistent with development;
2. Developing an integrated, efficient, inclusive low-carbon transport system;
3. Promoting adaptation in urban design, energy and material-efficiency in buildings, and sustainable urbanization;
4. Promoting economy-wide decoupling of growth from emissions and development of an efficient, innovative low-emission industrial system;
5. CO2 removal and related engineering solutions;
6. Enhancing Forest and vegetation cover consistent with socio-economic and ecological considerations; and
7. Economic and financial aspects of low-carbon development and Long-Term Transition to Net-Zero by 2070.

2. India and Vietnam joined forces to develop the National Maritime Heritage Complex (NMHC) in Lothal.

News:

India and Vietnam, two nations with a rich and intertwined maritime history, are joining forces to develop the National Maritime Heritage Complex (NMHC) in Lothal, Gujarat.

This partnership, rooted in centuries-old maritime connections, highlights the enduring bond between the two countries and their commitment to preserving and celebrating their shared heritage.

The project, which commenced in March 2022, is being developed at a cost of around Rs. 4500 crores and will include several innovative and unique features.

These include a *Lothal mini recreation to replicate Harappan architecture and lifestyle, four theme parks (Memorial theme park, Maritime and Navy theme park, Climate theme park, and Adventure and Amusement theme park), and fourteen galleries* highlighting India's maritime heritage from the Harappan times to the present day.

3. India is the 2nd Largest Aluminium Producer in the World

News:

Ministry of Mines

India is the 2nd Largest Aluminium Producer in the World

Mineral Production on Growth Track in Q1 of FY 2024-25

Learn how Aluminium is produced?

The pure form of aluminium does not naturally occur in nature, so remained largely unknown until as recently as 200 years ago. Creating aluminium using electricity was first developed in 1886 and is still used to this day.


Electrolytic reduction
REDUCTION PROCESS
At an aluminium smelter, alumina is poured into special reduction cells with molten cryolite at 950°C. Electric currents are then induced in the mixture at 400 kA or above; this current breaks the bond between the aluminium and oxygen atoms resulting in liquid aluminium settling at the bottom of the reduction cell.
Casting
PRIMARY ALUMINIUM
Primary aluminium is cast into ingots and shipped to customers or used in the production of aluminium alloys for various purposes.

As per the PIB:

India is the 2nd largest Aluminium producer, 3rd largest lime producer and 4th largest iron ore producer in the world.

Continued growth in production of iron ore and limestone in the current financial year reflects the robust demand conditions in the user industries viz. steel and cement.

Coupled with growth in Aluminium, these growth trends point towards continued strong economic activity in user sectors such as energy, infrastructure, construction, automotive and machinery.

4. Gramodyog Vikas Yojana (GVY).

News:

Budget 2024: Khadi Gramodyog Vikas Yojana allocation rises 13% to ₹1,037.19 crore

Read in details:

1. Introduction of KGVY

Khadi and Village Industries sectors had various independent schemes, developed to meet the needs of KVI sector in the past plan periods. In November, 2019, all the existing KVI schemes/sub-schemes/components were merged, and brought under one umbrella scheme namely Khadi and Gramodyog Vikas Yojana (KGVY). KGVY is a Central Sector Scheme and there is no State component involved in this scheme.

KGVY has following three components:

"Khadi Vikas Yojana (KVY)"scheme is for promotion and development of Khadi sector i.e. cotton, woolen, silk and the existing schemes like Modified Market Development Assistance (MMDA), Interest Subsidy Eligibility Certificate (ISEC), Khadi Reforms Development Programme (KRDP), Workshed Scheme for Khadi Artisans, Strengthening infrastructure of existing weak Khadi Institutions and Assistance for Marketing Infrastructure, Khadi (S&T) and Centre of Excellence (CoE) for Khadi.

"Gramodyog Vikas Yojana (GVY)"scheme is for promotion and development of village industries through common facilities, technological modernization, training etc. &other support and services for promotion of village Industries. GVY has the following components/ verticals from the activities under Village Industries:

a. Wellness & Cosmetics Industry (WCI)
b. Handmade Paper, Leather & Plastic Industry (HPLPI)
c. Agro Based & Food Processing Industry (ABFPI)
d. Mineral Based Industry (MBI)
e. Rural Engineering & New Technology Industry (RENTI)
f. Service Industry

"Khadi Grant" covers all the establishment expenses of the Officers/Staff members of the KVIC.

2.1 Eligibility Criteria:

- Any Indian Citizen may be the beneficiary of KGVY.
- The beneficiaries may be identified by KVIC, NGOs /KIs/VIs/KVIB's/ DIC's/FPOs etc.
- Age Group: 18-55 Years.

5. Details of Activities under Village Industries Verticals of KVIC:

There are six major verticals identified by KVIC for the development of the Village Industries. They are viz. Mineral Based Industries, Rural Engineering and New Technology Industries, Agro Based Food Processing Industries, Wellness and Cosmetics Industries, Hand Made Paper, Leather & Plastic Industries and Service Industries. Specific industry/industries are selected from the plethora of each industries verticals for the focused and smooth implementation of the programme. Each verticals are unique and have got

5. Rajya Sabha Elections

Each state has a fixed number of RS seats and 1/3rd of them come up for election every 2 years.

Article 80 of the constitution stipulates the maximum size of the house. The number of elected RS members from the States & UTs cannot be more than 238. Apart from the elected members, 12 members can be nominated by the President of India. **Currently there are 233 elected members and 12 nominated members.**

80. Composition of the Council of States.—(*1*) [2][3*** The Council of States] shall consist of—

(*a*) twelve members to be nominated by the President in accordance with the provisions of clause (*3*); and

(*b*) not more than two hundred and thirty-eight representatives of the States [4][and of the Union territories.]

(*2*) The allocation of seats in the Council of States to be filled by representatives of the States [4][and of the Union territories] shall be in accordance with the provisions in that behalf contained in the Fourth Schedule.

The system of election of members to the Rajya Sabha is by **proportional representation by means of the single transferable vote (STV).** The STV system is similar to the one followed in the election to the **President of India and members of the legislative council in states**. The vote is transferred from one candidate to another in any of the two situations mentioned below.

- When a candidate obtains more than what is required for his success and therefore has an unnecessary surplus
- When a candidate polls so few votes that he has absolutely no chance and therefore the votes nominating him are liable to be wasted

The Quota

The minimum number of valid votes required for a candidate to be declared elected is called the quota. The quota calculation depends on the number of seats to be filled.

Scenario 1:

At an election where only one seat is to be filled, every ballot paper is deemed to be of the value of one and the quota is calculated by adding the values credited to all the candidates and dividing the

total by two and adding one to the quotient, ignoring the remainder, if any, and the resulting number is the quota. It has to be:

$$\text{votes needed to win} = \left(\frac{\text{valid votes cast}}{\text{seats to fill} + 1}\right) + 1$$

For instance, if the total number of votes polled is 65, then the quota is

$$Quota = \frac{65}{1+1} + 1 = 33.5$$

In this case, for any candidate to be elected, he has to secure a minimum of 33 first preferential votes to be elected in the first round.

Scenario 2:

At an election where more than one seat is to be filled, every ballot paper is deemed to be of the value of 100 and the quota is determined by adding the values credited to all the candidates and dividing the total by a number which exceeds by one the number of vacancies to be filled and adding one to the quotient ignoring the remainder, if any, and the resulting number is the quota.

For instance, if 3 candidates are to be elected and the total number of voters who participated in the poll is 176, the quota is

$$Quota = \frac{176\ X\ 100}{3+1} + 1 = 4400 + 1 = 4401$$

In this case, a candidate has to get a minimum of 4401 votes or first preferential vote of 45 voters to be elected in the first round.

If none of the candidates get the required quota of first preference votes, then a process of vote transfer takes place, successively eliminating those who get the least number of first preferential votes.

5. Peoples' Climate Vote 2024: UNDP

News:

80 percent of people globally want stronger climate action by governments according to UN Development Programme survey

Landmark public opinion research reveals overwhelming majority around the world support more ambitious efforts and want to overcome geopolitical differences to fight climate crisis

The Peoples' Climate Vote 2024 is the second edition of the Peoples' Climate Vote survey, carried out by the United Nations Development Programme (UNDP) and the University of Oxford.

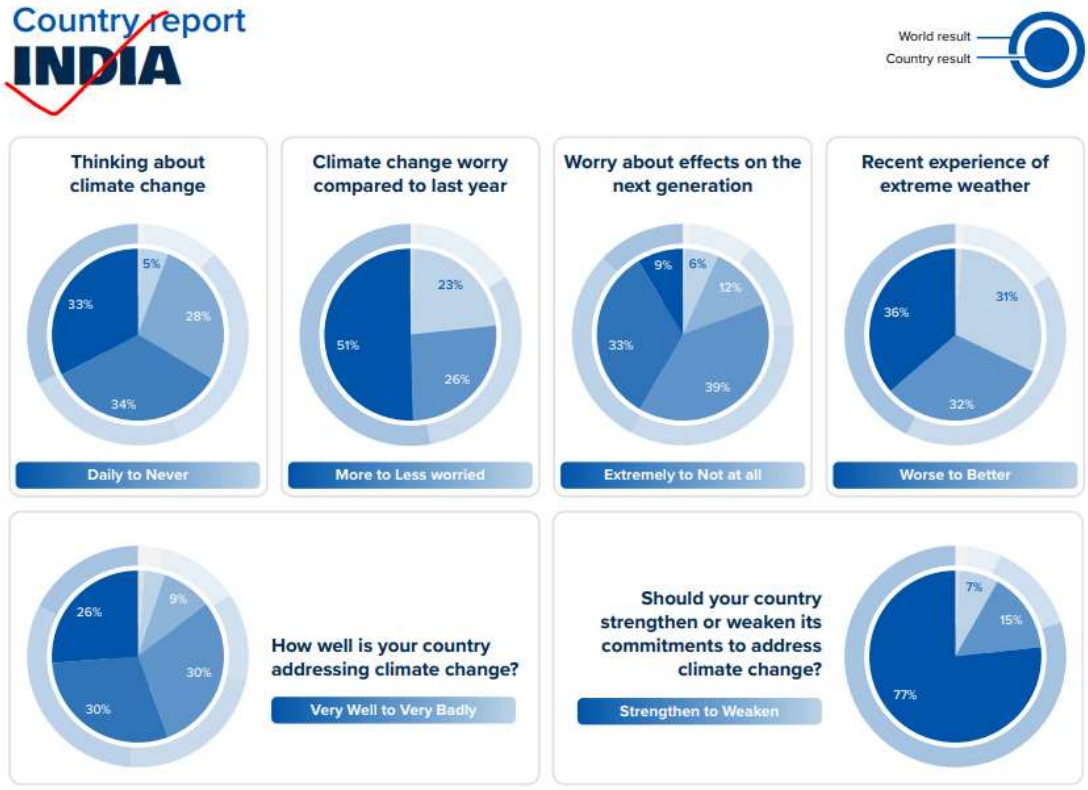
The 2024 survey is bigger in terms of countries: people in 77 countries, representing 87% of the world's population, were asked their views on climate change.

Why I took this news?

COUNTRIES SURVEYED

Afghanistan	India	Saudi Arabia
Algeria	Indonesia	Solomon Islands
Argentina	Iran (Islamic Republic of)	South Africa
Australia	Iraq	Spain
Bangladesh	Italy	Sri Lanka

Just see the results of new survey:



6. PM Vishwakarma Yojana

News:

Ministry of Micro,Small & Medium Enterprises

PM VISHWAKARMA YOJANA

Posted On: 01 AUG 2024 5:00PM by PIB Delhi

Read introduction:

1.1 A significant section of the workforce of the Indian Economy consists of artisans and craftspeople, who work with their hands and tools, are usually self-employed and are generally considered to be a part of the informal or unorganised sector of the economy. These traditional artisans and craftspeople are referred to as '*Vishwakarmas*' and are engaged in occupations like Blacksmiths, Goldsmiths, Potters, Carpenters, Sculptors, etc. These skills or occupations are passed from generation-to-generation following a *guru-shishya* model of traditional training, both within the families and other informal groups of artisans and craftspeople.

1.2 In the above backdrop, a new scheme, called 'PM Vishwakarma', aims at improving the quality, as well as the reach of products and services of artisans and craftspeople and to ensure that the *Vishwakarmas* are integrated with the domestic and global value chains. It is the goal of this Scheme to offer holistic end-to-end support to the *Vishwakarmas*, i.e. the artisans and craftspeople, to enable them to move up the value chain in their respective trades. It will bring a qualitative shift in

2.1 Objective

The objectives of the Scheme are as under:

- To enable the **recognition of artisans and craftspeople as *Vishwakarma*** making them eligible to avail all the benefits under the Scheme.
- To provide **skill upgradation** to hone their skills and make relevant and suitable training opportunities available to them.
- To provide **support for better and modern** tools to enhance their capability, productivity, and quality of products.
- To provide the beneficiaries an **easy access to collateral free credit** and reduce the cost of credit by providing interest subvention.
- To provide **incentives for digital transaction** to encourage the digital empowerment of these *Vishwakarmas*.
- To provide **a platform for brand promotion and market linkages** to help them access new opportunities for growth.

PM Vishwakarma Certificate and ID Card

The artisans and craftspeople will receive PM Vishwakarma Certificate and PM Vishwakarma ID Card. A unique digital number shall be created and reflected on the certificate and the ID Card. The certificate shall enable the applicant's recognition as a *Vishwakarma* and shall make them eligible to avail all the benefits under the PM Vishwakarma Scheme. The PM Vishwakarma Certificate and ID Card will be provided digitally as well as in physical form to the beneficiaries.

Under PM Vishwakarma, financial support will be provided to the targeted beneficiaries in the form of collateral free 'Enterprise Development Loans'.

(iv) The loan is required to be repaid in monthly installments; the term of repayment is as indicated in the following table:

Tranches	Amount of Loan (In Rs.)	Tenure of Repayment (In months)
1st Tranche	Upto 1,00,000	18 months
2nd Tranche	Upto 2,00,000	30 months

4. Eligibility

(i) An artisan or craftsperson working with hands and tools and engaged in one of the family-based traditional trades specified in Para 2.3, in the unorganized sector on self-employment basis, shall be eligible for registration under PM Vishwakarma.

(ii) The minimum age of the beneficiary should be 18 years on the date of registration.

(iii) The beneficiary should be engaged in the trades concerned on the date of registration and should not have availed loans under similar credit-based schemes of Central Government or State Government for self-employment/ business development, e.g. PMEGP, PM SVANidhi, Mudra, in the past 5 years. However, the beneficiaries of MUDRA and SVANidhi who have repaid their loan, will be eligible under PM Vishwakarma. This period of 5 years will be calculated from the date of sanction of the loan.

(iv) The registration and benefits under the Scheme shall be restricted to one member of the family. For availing benefits under the Scheme, a 'family' is defined as consisting of the husband, wife and unmarried children.

(v) A person in government service and their family members shall not be eligible under the Scheme.

7. Hydro Potential in India

News:

Ministry of Power

HYDRO POTENTIAL IN THE COUNTRY

Posted On: 01 AUG 2024 2:06PM by PIB Delhi

The Government of India has taken following initiatives to harness the hydro potential including the hydro pumped storage potential:

i. Declaring large hydropower projects (capacity above 25 MW) as renewable energy source.
ii. Hydro Purchase Obligation (HPO) as a separate entity within Non-solar Renewable Purchase Obligation (RPO).
iii. Tariff rationalization measures for bringing down hydropower tariff.
iv. Budgetary support for Flood Moderation/Storage hydroelectric projects.
v. Budgetary support towards cost of enabling infrastructure, i.e. roads/bridges.
vi. Guidelines to promote development of Pumped Storage Projects (PSPs) in the country was issued on 10th April, 2023.
vii. Waiver of Inter State Transmission System (ISTS) charges for hydroelectric projects and PSPs.
viii. Reduction of timeline by Central Electricity Authority (CEA) for concurrence of Detailed Project Report (DPR).

Updated on 12-06-2023
Source: OM SECTION

1.Total Installed Capacity (As on 31.05.2023) - Source : Central Electricity Authority (CEA)

INSTALLED GENERATION CAPACITY (SECTOR WISE) AS ON 31.05.2023

Sector	MW	% of Total
Central Sector	1,00,055	24.0%
State Sector	1,05,726	25.3%
Private Sector	2,11,887	50.7%
Total	**4,17,668**	

Installed GENERATION CAPACITY(FUELWISE) AS ON 31.05.2023

CATAGORY	INSTALLED GENERATION CAPACITY(MW)	% of SHARE IN Total
Fossil Fuel		
Coal	205,235	49.1%
Lignite	6,620	1.6%
Gas	24,824	6.0%
Diesel	589	0.1%
Total Fossil Fuel	**2,37,269**	**56.8 %**
Non-Fossil Fuel		
RES (Incl. Hydro)	**173,619**	**41.4%**
Hydro	**46,850**	**11.2 %**
Wind, Solar & Other RE	125,692	30.2 %
Wind	42,868	10.3 %
Solar	67,078	16.1 %
BM Power/Cogen	10,248	2.5 %
Waste to Energy	554	0.1 %
Small Hydro Power	4,944	1.2 %
Nuclear	6,780	**1.6%**
Total Non-Fossil Fuel	**179,322**	43.0%
Total Installed Capacity	**4,17,668**	**100%**

8. Soil organic carbon (SOC)

Soil organic carbon is a measurable component of soil organic matter. Organic matter makes up just 2–10% of most soil's mass and has an important role in the physical, chemical and biological function of agricultural soils.

Organic matter contributes to nutrient retention and turnover, soil structure, moisture retention and availability, degradation of pollutants, and carbon sequestration.

Soil organic carbon (SOC) content is important for climate change mitigation, but it is equally important for farmers and biodiversity. Increasing soil carbon has the effect of drawing down carbon from the atmosphere, while simultaneously improving soil structure and soil health, soil fertility and crop yields, water retention and aquifer recharge. A soil must have at least 5% organic matter to be considered healthy.

In recent years, "**carbon farming" has gained traction**. It is the process of changing agricultural practices or land use to sequester carbon in soil and litter, as well as emission avoidance through better land management.

Also see Soil Organic Matter (SOM)

What is soil organic matter?

SOM is composed mainly of carbon, hydrogen and oxygen, and has small amounts of other elements, such as nitrogen, phosphorous, sulfur, potassium, calcium and magnesium contained in organic residues. It is divided into 'living' and 'dead' components and can range from very recent inputs, such as stubble, to largely decayed materials that are thousands of years old. About 10% of below-ground SOM, such as roots, fauna and microorganisms, is 'living' (Figure 1).

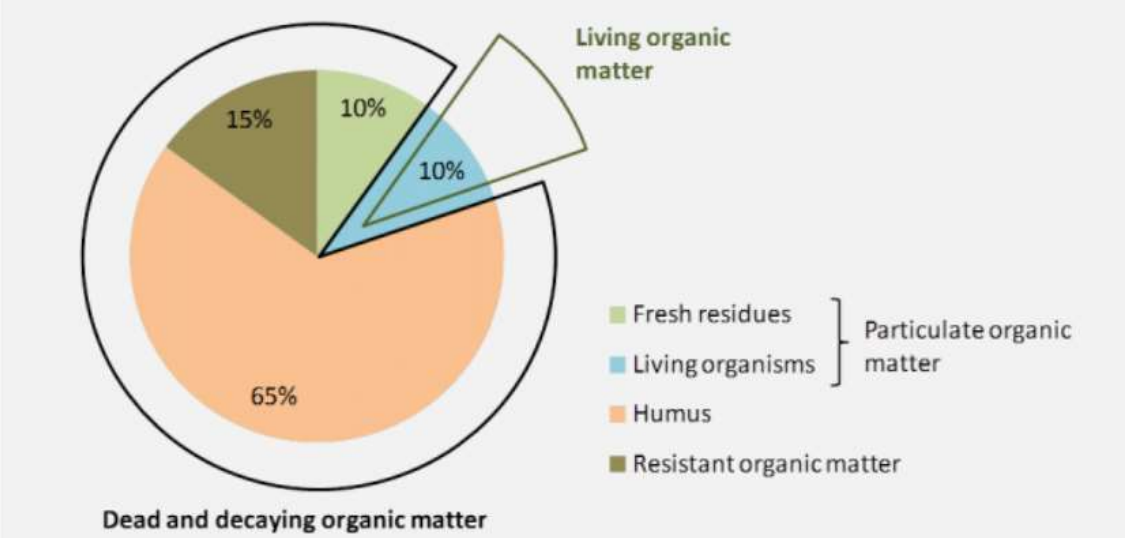


Figure 1 Most soil organic matter is dead or decaying, with living organisms making up about 10% of the soil organic matter pool

SOM exists as 4 distinct fractions which vary widely in size, turnover time and composition in the soil:

- **dissolved organic matter**
- **particulate organic matter**
- **humus**
- **resistant organic matter.**

9. Pumped Storage Hydropower Projects

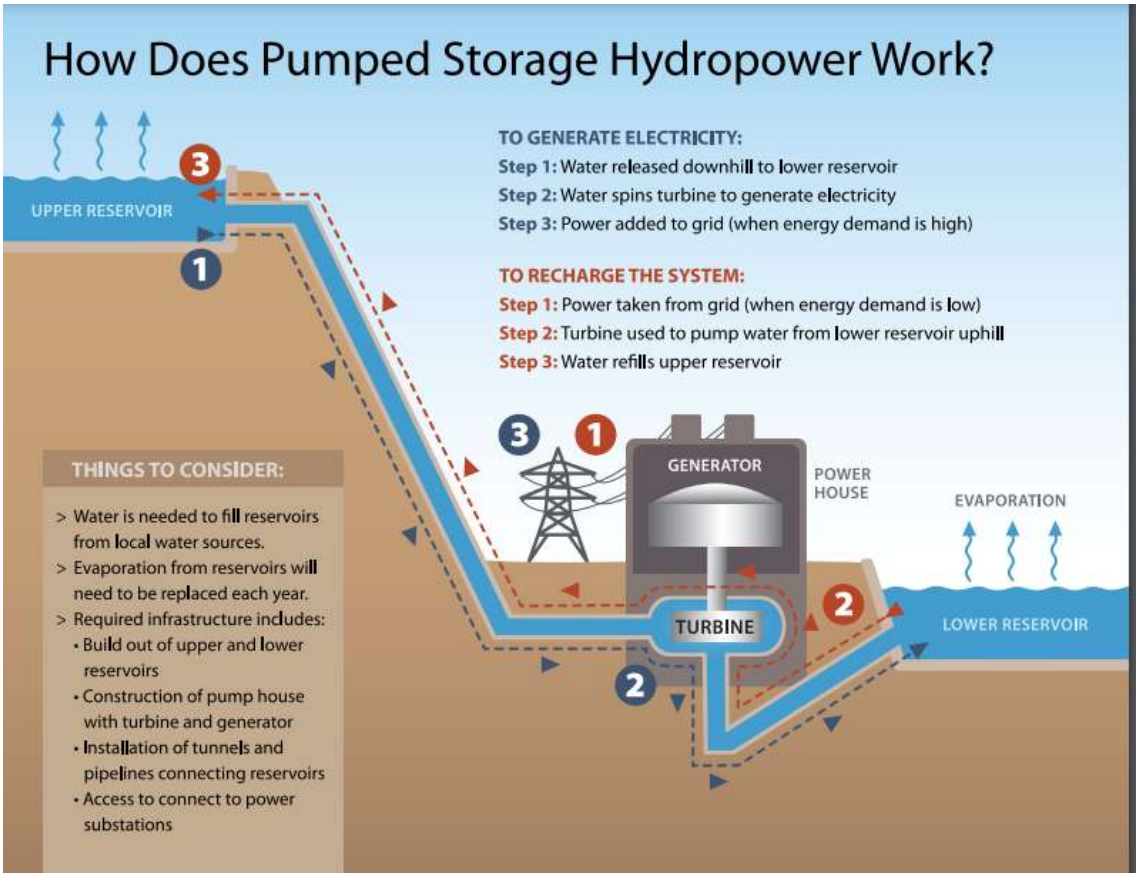
News: In her recent budget speech, Union Finance Minister Nirmala Sitharaman said a ***policy to promote pumped storage would be brought out to facilitate "smooth integration of the growing share of renewable energy with its variable and intermittent nature in the energy mix***."

Let understand in simple language:

Pumped storage hydropower (PSH) is a type of hydroelectric energy storage.

Pumped storage plants use the principle of gravity to generate electricity using water that has been previously pumped from a lower source to an upper reservoir.

Operation of pumped storage power plants requires two reservoirs viz. **upper and lower reservoir.** Water in upper reservoir is used for generating power during peak demand hours. The water in the lower reservoir is pumped back to the upper reservoir during the off-peak hours and the cycle continues.



Need for Pumped Storage Hydropower Project

Renewable energy sources like solar & wind energy are intermittent and variable in nature. **This leads to challenges of grid-stability and temporal considerations in power availability**. This requires immediate ramp-up & back down of generation for grid balancing & stability of grid frequency.

Pump Storage Technology is the only long term technically proven, cost-effective, highly efficient & operationally flexible way of energy storage on a large scale & available at short notice.

Advantages of pumped storage plants

Pumped storage plants **can generate power continuously for long duration**, depending on the storage capacity of the reservoir. These **plants have a lifetime of over 40 years, and they operate with an efficiency of 70-80 per cent**. Further, as compared to the conventional thermal generator, PSP has the ability of quick start-stop as well as higher ramping capability.

3. GLOBAL SCENARIO

Around 175 GW of pumped hydro storage capacity is installed worldwide as of 2022, with leading countries being China with 44.7 GW, followed by Japan with 27.5 GW, and United States with 22 GW. The Figure 2 presents the status of PSH installed across countries having large storage capacities[6].

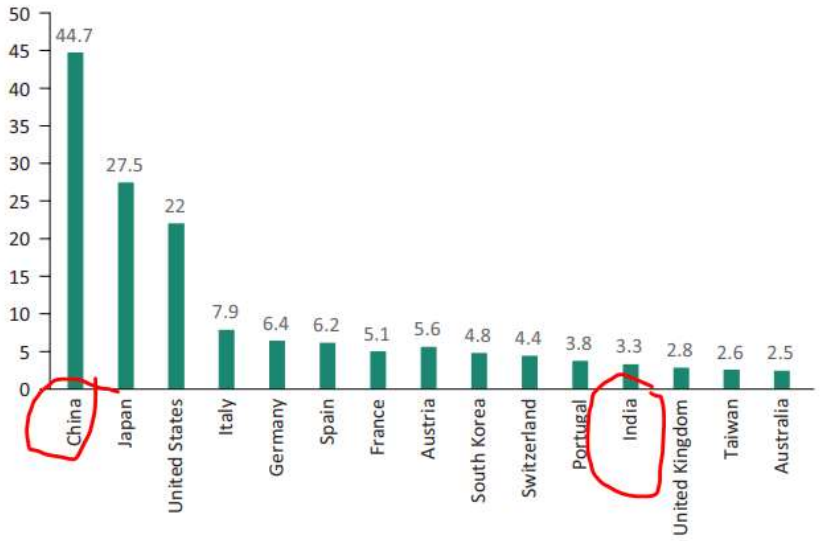


Figure 2: PSH installed across countries with large storage capacities

As per CEA, the current potential of 'on-river pumped storage' in India is 103 GW10. It is noted that out of 4.76 GW of installed capacity, **3.36 GW capacity is working in pumping mode.**

Nagarjunasagar, Kadana, Kadamparai, Panchet and Bhira were the earliest pumped hydro storage projects developed in the States from 1987 to 1995. Ghatghar and Purulia were developed in 2008 in Maharashtra and West Bengal respectively. Tehri PSH and Turga PSH are expected to be commissioned during 2023-24 and onwards. The details of these projects[11] are given in Table 3.

10. Prompt Corrective Action (PCA) Framework for Primary (Urban) Co-operative Banks (UCBs)

News:

Prompt Corrective Action (PCA) Framework for Primary (Urban) Co-operative Banks (UCBs)

:C.No.8/11.01.005/2024-25

July 26, 2024

The Reserve Bank of India issued a Prompt Corrective Action (PCA) Framework for Primary (Urban) Co-operative Banks (UCBs). The provisions of the PCA Framework will be effective from April 1, 2025.

Capital, Asset Quality and Profitability will be the key areas for monitoring in the revised PCA Framework.

Breach of any risk threshold as detailed under) may result in invocation of PCA.

PCA matrix – Parameters, Indicators and Risk Thresholds

Parameter	Indicator	Risk Threshold 1	Risk Threshold 2	Risk Threshold 3
(1)	(2)	(3)	(4)	(5)
Capital (Breach of CRAR)	CRAR – Minimum Regulatory Requirement, as applicable*	Up to 250 bps below the Indicator prescribed at column (2)	More than 250 bps but not exceeding 400 bps below the Indicator prescribed at column (2)	In excess of 400 bps below the Indicator prescribed at column (2)
Asset Quality	Net Non-Performing Advances (NNPA) Ratio	>=6.0% but <9.0%	>=9.0% but < 12.0%	>=12.0%
Profitability	Net profit	Incurred losses during two consecutive years	--	--

Indicators to be tracked for Capital, Asset Quality and Profitability would be CRAR, Net NPA Ratio (percentage of net NPA to net advances) and net profit, respectively.

. Where a bank is placed under PCA, one or more of the following corrective actions may be prescribed:

Mandatory and discretionary actions

Specifications	Mandatory actions	Discretionary actions
Risk Threshold 1	i. Bank to raise capital either from existing members or by issuance of equity and other permissible capital instruments ii. Restriction on declaration/payment of dividend/donation iii. Appropriate restrictions on capital expenditure, other than for technological upgradation	Common menu - Actions pertaining to: i. Special Supervisory Actions ii. Strategy related iii. Governance related iv. Capital related v. Credit risk related vi. Market risk related vii. HR related viii. Profitability related ix. Operations/Business related x. Imposition of All Inclusive Directions/ Cancellation of Banking License xi. Any other
Risk Threshold 2	In addition to mandatory actions of Threshold 1, i. Restriction on branch expansion	
Risk Threshold 3	In addition to mandatory actions of Thresholds 1 & 2, i. Appropriate restrictions/ prohibition on expansion of total size of the deposits	

A bank will generally be placed under PCA Framework based on the Reported/Audited Annual Financial Results and/or the ongoing Supervisory Assessment made by RBI.

Although supervisory action taken will primarily be based on the criteria specified under the PCA Framework, **the Reserve Bank will not be precluded from taking appropriate supervisory action in case stress is noticed in other important indicators/parameters or in case of serious governance issues.**

Exit from PCA and Withdrawal of Restrictions under PCA

Once a bank is placed under PCA, taking the bank out of PCA Framework and/or withdrawal of restrictions imposed under the PCA Framework will be considered:

a) if no breaches in risk thresholds in any of the parameters are observed as per four continuous quarterly financial statements, one of which should be Audited Annual Financial Statement (subject to assessment by RBI); and

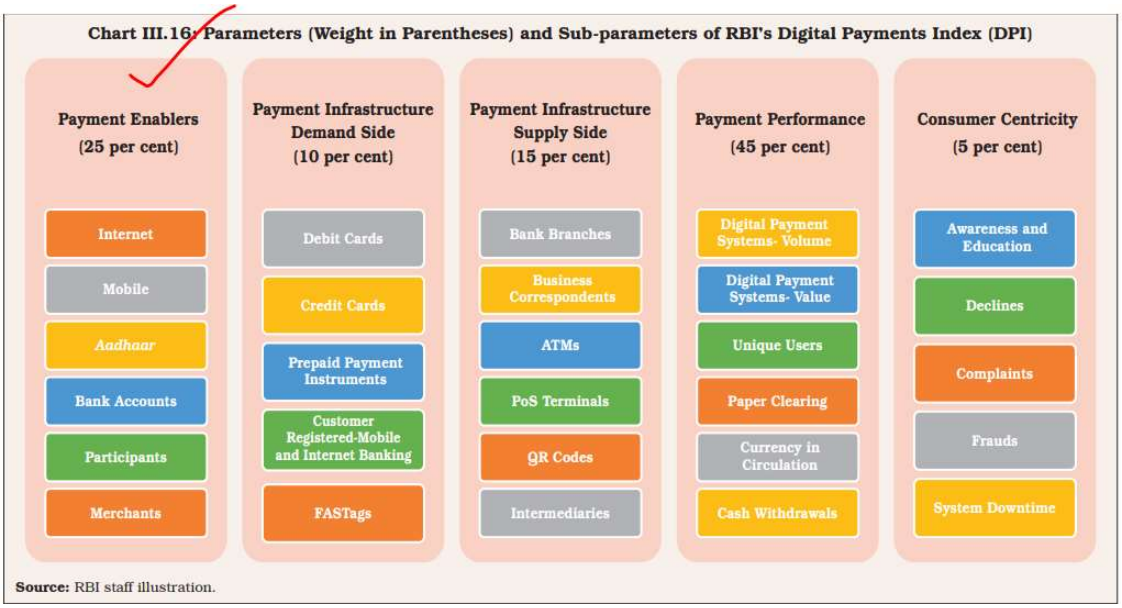
b) based on supervisory comfort of the RBI, including an assessment on sustainable improvement in key financials of the bank.

11. Digital Payments Index (DPI): RBI

Read:

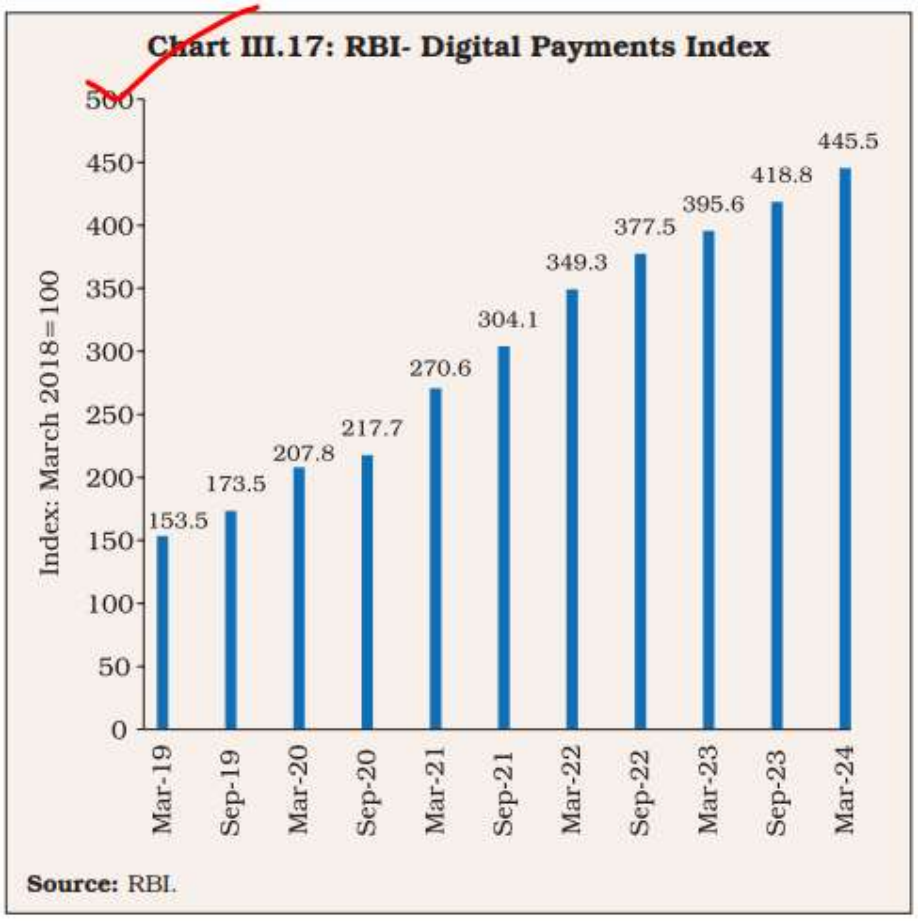
III.40 The Digital Payments Index (DPI), constructed by the Reserve Bank of India with March 2018 as the base year, captures the extent of digitisation of payments across the country. It comprises of five broad parameters that capture demand and supply side factors to measure deepening and penetration of digital payments: (i) payment enablers, (ii) payment infrastructure – demand-side factors, (iii) payment infrastructure – supply-side factors, (iv) payment performance and (v) consumer centricity. Each of these parameters have sub-parameters that consist of various measurable indicators (Chart III.16).

Chart III.16: Parameters (Weight in Parentheses) and Sub-parameters of RBI's Digital Payments Index (DPI)



Source: RBI staff illustration.

Since March 2018, the DPI has increased more than four-fold to reach 445.5 in March 2024. The increase has been recorded across all parameters and driven particularly by payment performance and payment infrastructure across the country, over the period.



12. World Bank's new Business-Ready (B-Ready) index

News:

World Bank B-Ready index groundwork kicks off

By Kirtika Suneja, ET Bureau • Last Updated: Aug 05, 2024, 12:51:00 AM IST

FOLLOW US SHARE FONT SIZE

Business Ready (B-READY) is the World Bank's new flagship report benchmarking the business environment and investment climate in most economies worldwide.

Business Ready (B-READY) is the World Bank Group's new corporate flagship being implemented in the Development Economics Global Indicators Group. B-READY provides a quantitative assessment of the business environment for private sector development, published annually and covering most economies worldwide. B-READY data and the summary report will aim to advocate for policy reform, inform specific policy advice, and provide data for development policy research. Through its focus on private sector development, B-READY will effectively contribute to meeting the twin goals of the World Bank Group (WBG) of eliminating poverty and boosting shared prosperity.

B-READY assesses an economy's business environment by focusing on the regulatory framework and the provision of related public services directed at firms and markets, as well as the efficiency with which regulatory framework and public services are combined in practice. B-READY seeks a balanced approach when assessing the business environment: between ease of conducting a business and broader private sector benefits, between regulatory framework and public services, between de jure laws and regulations and de facto practical implementation, and between data representativeness and data comparability.

B-READY focuses on ten topics that are organized following the life cycle of the firm and its participation in the market while opening, operating (or expanding), and closing (or reorganizing) a business. The ten topics are Business Entry, Business Location, Utility Connections, Labor, Financial Services, International Trade, Taxation, Dispute Resolution, Market Competition, and Business Insolvency. Within each topic, considerations relevant to the business environment regarding aspects of the adoption of digital technology, environmental sustainability, and gender are captured.

With data that are comparable across economies and over time, B-READY provides actionable evidence to promote reforms for a stronger private sector.

The first B-READY report will be launched on October 3, 2024.

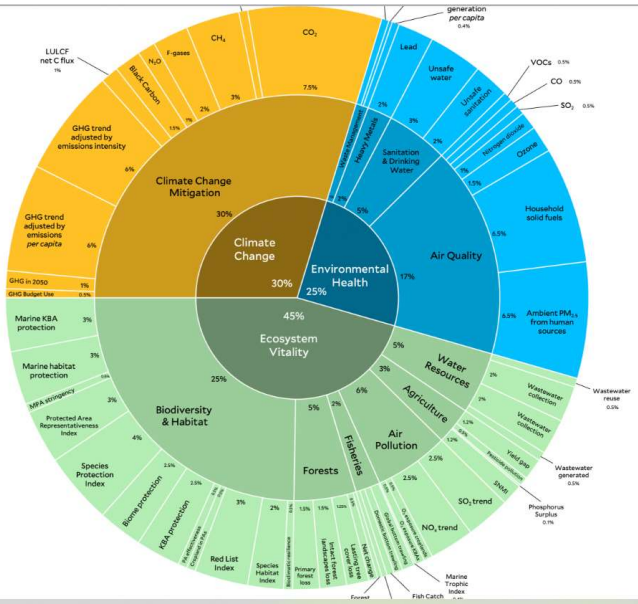
13. Environmental Performance Index 2024

Published by: Yale Centre for Environment Law & Policy (Yale University), Centre for International Earth Science Information Network (Columbia University).

The 2024 Environmental Performance Index (EPI) provides a data-driven summary of the state of sustainability around the world.

Using **58 performance indicators across 11 issue categories**, the EPI ranks 180 countries on climate change performance, environmental health, and ecosystem vitality.

The framework organizes 58 indicators into 11 issue categories and three policy objectives, with weights shown at each level as a percentage of the total score.

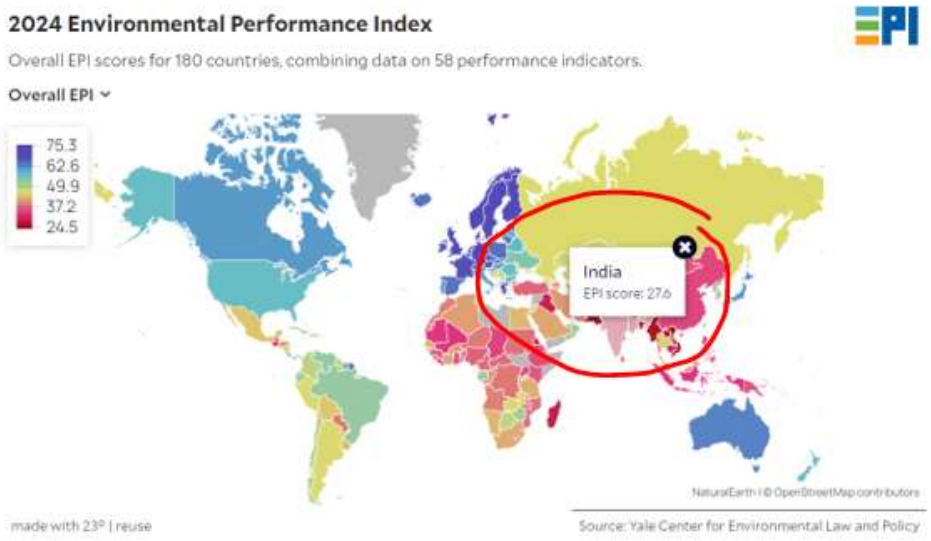


Global Rankings:

1. Estonia, Luxembourg and Germany are the three highest ranked countries.

RANK	COUNTRY	SCORE	REG
1	Estonia	75.3	1
2	Luxembourg	75.0	1
3	Germany	74.6	2
4	Finland	73.7	3
5	United Kingdom	72.7	4
6	Sweden	70.5	5
7	Norway	70.0	6
8	Austria	69.0	7
9	Switzerland	68.0	8
10	Denmark	67.9	9
11	Greece	67.4	2

India is one of the lowest rank countries in the world in EPI-2024. India has rank of 176 among 180 countries in the world. Only Myanmar, Laos, Pakistan and Vietnam are ranked below India.



One more thing:

Why did a country rise/drop since the last EPI?

A country's current score in the 2024 EPI should not be compared to scores from previous versions of the Index. With every version of the EPI, we change the methodology and use new datasets to reflect the latest advances in science and metrics. These changes mean that scores calculated under the old methods are not comparable to the new scores.

14. India's first 24/7 'Grain ATM'

News:

9 August 2024

WFP and Government of Odisha partner for food security and launch India's first 24/7 'Grain ATM'

World Food Programme and the Government of Odisha launched India's first around the clock grain dispensing machine, the 'Grain ATM,' also known as 'Annapurti' (Hindi for fulfiller of food), in the state capital Bhubaneshwar.

Odisha has become the **first state in India to provide access to the public distribution system beneficiaries 24 hours a day.**

The ATMs will be set up across the state to provide food grains to beneficiaries with 24/7 access under the National Food Security Act.

Today also learn complete about NFSA:

The National Food Security Act, 2013 was notified on 10th September, 2013 with the objective to provide for food and nutritional security in human life cycle approach, by ensuring access to adequate quantity of quality food at affordable prices to people to live a life with dignity.

THE NATIONAL FOOD SECURITY ACT, 2013

ACT NO. 20 OF 2013

[10*th September*, 2013.]

An Act to provide for food and nutritional security in human life cycle approach, by ensuring access to adequate quantity of quality food at affordable prices to people to live a life with dignity and for matters connected therewith or incidental thereto.

1. Priority households are entitled to 5 kgs of food grains per person per month, and Antyodaya households to 35 kgs per household per month. The combined coverage of Priority and Antyodaya households (called "eligible households") shall extend "up to 75% of the rural population and up to 50% of the urban population".

3. Right to receive foodgrains at subsidised prices by persons belonging to eligible households under Targeted Public Distribution System.—(*1*) Every person belonging to priority households, identified under sub-section (*1*) of section 10, shall be entitled to receive five kilograms of foodgrains per person per month at subsidised prices specified in Schedule I from the State Government under the Targeted Public Distribution System:

Provided that the households covered under Antyodaya Anna Yojana shall, to such extent as may be specified by the Central Government for each State in the said scheme, be entitled to thirty-five kilograms of foodgrains per household per month at the prices specified in Schedule I:

(*2*) The entitlements of the persons belonging to the eligible households referred to in sub-section (*1*) at subsidised prices shall extend up to seventy-five per cent. of the rural population and up to fifty per cent. of the urban population.

2. For children in the age group of 6 months to 6 years, the Bill guarantees an age-appropriate meal, free of charge, through the local anganwadi. For children aged 6-14 years, one free mid-day meal shall be provided every day (except on school holidays) in all schools run by local bodies, government and government aided schools, up to Class VIII. For children below six months, "exclusive breastfeeding shall be promoted".

5. Nutritional support to children.—(*1*) Subject to the provisions contained in clause (*b*), every child up to the age of fourteen years shall have the following entitlements for his nutritional needs, namely:—

(*a*) in the case of children in the age group of six months to six years, age appropriate meal, free of charge, through the local *anganwadi* so as to meet the nutritional standards specified in Schedule II:

Provided that for children below the age of six months, exclusive breast feeding shall be promoted;

(*b*) in the case of children, up to class VIII or within the age group of six to fourteen years, whichever is applicable, one mid-day meal, free of charge, everyday, except on school holidays, in all schools run by local bodies, Government and Government aided schools, so as to meet the nutritional standards specified in Schedule II.

3. Every pregnant and lactating mother is entitled to a free meal at the local anganwadi (during pregnancy and six months after childbirth) as well as maternity benefits of Rs 6,000, in instalments.

4. Nutritional support to pregnant women and lactating mothers.—Subject to such schemes as may be framed by the Central Government, every pregnant woman and lactating mother shall be entitled to—

(*a*) meal, free of charge, during pregnancy and six months after the child birth, through the local *anganwadi*, so as to meet the nutritional standards specified in Schedule II; and

(*b*) maternity benefit of not less than rupees six thousand, in such instalments as may be prescribed by the Central Government:

4. The Central Government is to determine the state-wise coverage of the PDS, in terms of proportion of the rural/urban population. Then numbers of eligible persons will be calculated from Census population figures.

9. Coverage of population under Targeted Public Distribution System.— The percentage coverage under the Targeted Public Distribution System in rural and urban areas for each State shall, subject to sub-section (*2*) of section 3, be determined by the Central Government and the total number of persons to be covered in such rural and urban areas of the State shall be calculated on the basis of the population estimates as per the census of which the relevant figures have been published.

5. The identification of eligible households is left to state governments, subject to the scheme's guidelines for Antyodaya, and subject to guidelines to be "specified" by the state government for Priority households.

10. State Government to prepare guidelines and to identify priority households.— (*1*) The State Government shall, within the number of persons determined under section 9 for the rural and urban areas, identify—

(*a*) the households to be covered under the Antyodaya Anna Yojana to the extent specified under sub-section (*1*) of section 3, in accordance with the guidelines applicable to the said scheme;

(*b*) the remaining households as priority households to be covered under the Targeted Public Distribution System, in accordance with such guidelines as the State Government may specify:

6. The Act provides for the creation of State Food Commissions. Each Commission shall consist of a chairperson, five other members and a member-secretary (including at least two women and one member each from Scheduled Castes and Scheduled Tribes).

16. State Food Commission.—(*1*) Every State Government shall, by notification, constitute a State Food Commission for the purpose of monitoring and review of implementation of this Act.

(*2*) The State Commission shall consist of—

(*a*) a Chairperson;

(*b*) five other Members; and

(*c*) a Member-Secretary, who shall be an officer of the State Government not below the rank of Joint Secretary to that Government:

Provided that there shall be at least two women, whether Chairperson, Member or Member-Secretary:

Provided further that there shall be one person belonging to the Scheduled Castes and one person belonging to the Scheduled Tribes, whether Chairperson, Member or Member-Secretary.

The main function of the State Commission is to monitor and evaluate the implementation of the act, give advice to the states governments and their agencies, and inquire into violations of entitlements (either suo motu or on receipt of a complaint, and with "all the powers of a civil court while trying a suit under the Code of Civil Procedure 1908"). State Commissions also have to hear appeals against orders of the District Grievance Redressal Officer and prepare annual reports to be laid before the state legislature.

7. The Centre should provide all possible resource and funds to prevent scarcity.

OBLIGATIONS OF CENTRAL GOVERNMENT FOR FOOD SECURITY

22. Central Government to allocate required quantity of foodgrains from central pool to State Governments.—(*1*) The Central Government shall, for ensuring the regular supply of foodgrains to persons belonging to eligible households, allocate from the central pool the required quantity of foodgrains to the State Governments under the Targeted Public Distribution System, as per the entitlements under section 3 and at prices specified in Schedule I.

8. Obligation of Local Authorities:

25. Implementation of Targeted Public Distribution System by local authority in their areas.—(*1*) The local authorities shall be responsible for the proper implementation of this Act in their respective areas.

(*2*) Without prejudice to sub-section (*1*), the State Government may assign, by notification, additional responsibilities for implementation of the Targeted Public Distribution System to the local authority.

26. Obligations of local authority.—In implementing different schemes of the Ministries and Departments of the Central Government and the State Governments, prepared to implement provisions of this Act, the local authorities shall be responsible for discharging such duties and responsibilities as may be assigned to them, by notification, by the respective State Governments.

9. Food security to people living in hilly areas:

PROVISIONS FOR ADVANCING FOOD SECURITY

30. Food security for people living in remote, hilly and tribal areas.—The Central Government and the State Governments shall, while implementing the provisions of this Act and the schemes for meeting specified entitlements, give special focus to the needs of the vulnerable groups especially in remote areas and other areas which are difficult to access, hilly and tribal areas for ensuring their food security.

15. IIT Guwahati develops 'LEAP'

News:

IIT Guwahati develops 'LEAP': Advanced Machine Learning Framework for the Semiconductor Industry

Publish Date:08-08-2024

Indian Institute of Technology Guwahati researchers have made significant advancements with the **development of an innovative machine learning (ML) framework named 'LEAP'**.

This cutting-edge solution **enhances the design process of Integrated Circuits (ICs), a critical component in the $600 billion semiconductor industry** that powers modern electronic devices.

Why this development?

The creation of ICs relies heavily software, which transforms high-level designs into a manufacturing format known as Graphic Design System (GDS**). However, designing ICs involves navigating complex problems that can be challenging to solve.**

Traditional methods often use techniques—quick problem-solving strategies that find acceptable solutions without necessarily achieving perfection. **While these approaches help balance design quality and runtime, they often yield less-than-ideal results.**

To address these challenges, IIT Guwahati have leveraged machine learning to improve efficiency in IC design.

16. Three Indian Ocean structures named Ashoka, Chandragupt and Kalpataru

News:

Three Indian Ocean structures named Ashoka, Chandragupt and Kalpataru

Previous structures named after physicist CV Raman, oceanographer NK Panikkar and geologist DN Wadia

Three underwater geographical structures located in the Indian Ocean have been awarded names proposed by India.

Three underwater geographical features in the Indian Ocean have been officially named, following proposals from India. These are the Ashoka Seamount, Chandragupt Ridge, and Kalpataru Ridge, recently recognized by the International Hydrographic Organization (IHO) and UNESCO's Intergovernmental Oceanographic Commission (IOC).

In all, there are now seven structures in the Indian Ocean named mainly after Indian scientists or bear names proposed by India in this region of the Indian Ocean.

17. Yen Carry Trade.

How Yen Carry Trade Works?

Borrow Japanese yen at a low-interest rate: Investors borrow Japanese yen, which typically has a very low-interest rate, often close to zero or even negative.

Convert the borrowed yen into a higher-yielding currency: The borrowed yen is then converted into a currency that has a higher interest rate, such as the US dollar, the Australian dollar, or the New Zealand dollar.

Invest in higher-yielding assets: The converted funds are then used to invest in higher-yielding assets, such as government bonds, corporate bonds, or other financial instruments denominated in the higher-yielding currency.

Profit from the interest rate differential: The investor earns the higher interest rate on the invested assets, while only paying the lower interest rate on the borrowed yen. The difference between the two interest rates is the potential profit from the carry trade.

Investors have been drawn to the **yen carry trade** for several reasons:

1. **Low-interest rates in Japan**: The persistently low-interest rates in Japan have made the yen an attractive currency to borrow, as the cost of borrowing is relatively low.
2. **Higher yields in other currencies:** Many other major economies, such as the United States, Australia, and New Zealand, have had higher interest rates than Japan, providing the opportunity to earn a higher return on investments.
3. **Potential for capital gains**: In addition to the interest rate differential, investors may also benefit from currency appreciation if the higher-yielding currency strengthens against the yen.

Now the news is:

What is Yen carry trade and why did it help trigger a global stock market fall?

The unwinding of the yen carry trade was one reason behind the fall in global markets on Monday. It had to do with recent policy decisions from Japan's central bank, which led global investors to sell their assets. Here is why.

Japan's currency has appreciated by 10 per cent against the dollar in just over 3 weeks, partly driven by the Bank of Japan's (BoJ's) 15-basis points rate hike to 0.25 per cent last week.

Just understand why increase in interest hikes led to fall in global stock market?

I want to explain first, why higher interest rates lead to currency appreciation?

Higher interest rates can increase a country's currency value by attracting foreign investment. When interest rates increase, it becomes more expensive to borrow and more rewarding to save, which can reduce demand and slow inflation. This can also make a country's assets, like bonds and savings accounts, more attractive to foreign investors. When foreign investors invest in a country, they often need to convert their currency into the local currency, which increases demand for that currency. This increased demand causes the value of the currency to go up, which is known as currency appreciation.

Now when currency appreciates: For example, here yen:

1 dollar = 50 yen (just as an example)

Now after appreciation:

1 dollar: 25 Yen.

So, what exactly will happen? If someone has dollar and wats to convert into yen, he will get less yen as compared to before. So, now he has to pay 2 dollars to get 50 yen (before it was only 1 dollar). Fear of further appreciation will force people to sell dollars and repay yen to Japanese banks as soon as possible.

Result: Turbulence in market (more number of dollars in market, their rupee will fall, it can lead to sudden and significant movements in exchange rates.). They will try to sell their stocks (as they fear further appreciation, they have to pay more dollars to return yen to Japanese bank)

Hope you understood why sudden increase in interest rates by Bank of Japan is creating problem in world economy.

18. PM-KUSUM Scheme

2024 marks the completion of five years of PM-KUSUM.

Read:

Introduction to PM-KUSUM

The Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM) was introduced in 2019 with the objectives of incorporating renewable energy in farmers' irrigation practices; helping farmers gain access to solar water-pumps at subsidized rates; and giving farmers an avenue to utilize their barren land through setting up of solar power plants for energy generation.

The PM-KUSUM scheme is divided into three components:

1. Component A: Installation of mini-grids on barren lands.
2. Component B: Replacement of diesel water pumps with off-grid solar water pumps.
3. Component C: Replacement of electric water pumps with on-grid solar water pumps and installation of mini-grids for agriculture feeder solarization.

Now understand every component:

The three components of the scheme have been planned in such a way as to offer benefits to farmers of all categories—marginal, small, medium and large—divided on the basis of landholdings. Component A benefits farmers by giving them access to an extra source of income from their barren land. Farmers can start a solar power plant between capacities 500 kW and 2 MW and sell the electricity generated to the grid. However, with no subsidy, this component would mostly benefit large farmers who have the capability to acquire large loans from banks (see *Table 1*).

Component B targets small farmers who are currently dependent on the erratic main grid agricultural supply. The farmers can opt for standalone solar water pumps replacing their electric/diesel pumps, which would lead to savings in terms of operational costs such as amount spent on purchasing diesel or paying electricity bills.

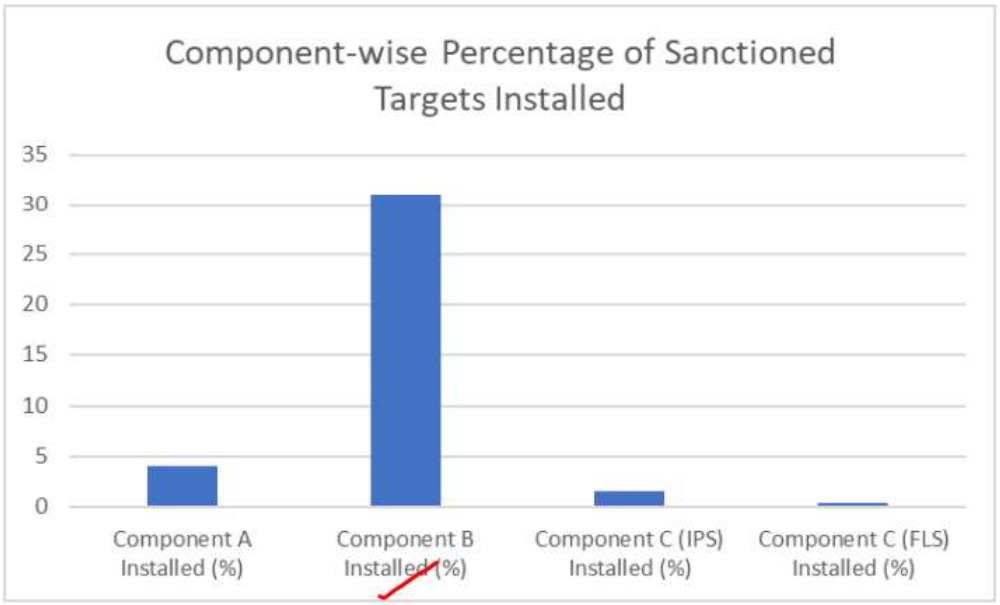
Component C is divided into two sub-components. The first is individual pump solarization (IPS), which involves setting up grid-connected solar water-pumps on farmers' lands. Under IPS, the capacity of the solar power plant can be twice the capacity of the farmers' existing water pumps in kW so that farmers can sell the excess electricity generated back to the grid. The second sub-component, feeder-level solarization (FLS) entails farmers with land located at a 5-km distance from the nearest substation to start a microgrid and sell power to the substation and power their agricultural feeders. This would help ease the subsidy burden from the state government with regard to the subsidy provided to the feeders' agricultural users.

Table 1: Component-wise savings/income of farmers

Component	Purpose	Assumption	Savings/income
Component A	Introduced to incentivize farmers with large areas of barren land to invest in solar power generation	A farmer with 14 acre of land would set up a plant of about 2.5 MW with an upfront cost of Rs 8 crore. The units generated in a day would be about 16,900 with a tariff of Rs 3.14/unit.	Daily income: Rs 53,066 Monthly income: Rs 15,91,980 Breakeven period: 5 years
Component B	Introduced to incentivize farmers to shift from electric/ diesel pumps to solar pumps	A farmer with 6 acre of land shifts from a 12 horsepower (hp) diesel pump to a 7.5 hp solar water-pump. The farmer used the diesel motor for 150 days a year using 5 litres/day of diesel on an average. The cost of diesel is Rs 86.52/litre.	Average annual savings: Rs 64,890
Component C	Introduced to incentivize farmers to replace their electric pumps with solar pumps and for farmers with large areas of barren land to invest in solar power generation	A farmer with 14 acre of land would set up a plant of about 2.5 MW with an upfront cost of Rs 8 crore. The units generated in a day would be 16,900 units with a tariff of Rs 3.51/unit.	Daily income: Rs 59,319 Monthly income: Rs 17,79,570 Breakeven period: 3–4 years

Current Status of PM KUSUM:

Graph 1: Percentage of installation against sanctioned targets under Components A, B and C as of April 2024



Source: MNRE KUSUM portal as accessed on June 20, 2024 https://pmkusum.mnre.gov.in/landing.html

Have a glance at states:

Table 2: Status of implementation under the PM-KUSUM Scheme as of June 2024

S. no.	State	Component A (MW)		Component B (number)		Component C (number)			
		Sanctioned	Installed	Sanctioned	Installed	Sanctioned (IPS)	Installed (IPS)	Sanctioned (FLS)	Installed
1	Arunachal Pradesh	2	0	700	199	0	0	0	0
2	Assam	10	0	4,000	0	1,000	0	0	0
3	Chhattisgarh	30	4	10,000	0	0	0	157,500	0
4	Bihar	0	0	0	0	0	0	160,000	0
5	Goa	150	0	900	0	0	0	11,000	0
6	Gujarat	500	0	8,082	5,218	0	0	11,000	700
7	Haryana	85	2.25	252,655	119,792	0	0	625,500	0
8	Himachal Pradesh	100	22.9	1270	497	0	0	0	0
9	Jammu and Kashmir	20	0	5,000	1,753	4,000	0	0	0
10	Jharkhand	20	0	42,985	14,242	1,000	0	0	0
11	Karnataka	0	0	27,214	1,368	0	0	587,000	0
12	Kerala	40	0	100	8	55,100	835	25,387	4421
13	Ladakh	0	0	1,400	0	0	0	0	0
14	Madhya Pradesh	600	16.13	22,400	7325	0	0	295,000	0
15	Maharashtra	700	2	405,000	101,819	0	0	775,000	3,650
16	Manipur	0	0	150	78	0	0	0	0
17	Meghalaya	0	0	3,035	96	0	0	0	0
18	Mizoram	0	0	2,700	0	0	0	0	0
19	Nagaland	5	0	265	65	0	0	0	0
20	Odisha	500	0	8,241	1,411	65,000	0	10,000	0
21	Puducherry	0	0	0	0	0	0	0	0
22	Punjab	220	0	103,000	12,952	186	0	75,000	0
23	Rajasthan	1,200	162	248,720	75,056	6,418	1,739	200,000	832
24	Tamil Nadu	424	0	5200	3236	0	0	0	0
25	Telangana	0	0	400	0	0	0	20,000	0
26	Tripura	5	0	10,895	2,516	2,600	50	0	0
27	Uttar Pradesh	155	0	114,790	54,943	2,000	0	370,000	0
28	Uttarakhand	0	0	5,685	318	200	0	0	0
29	West Bengal	0	0	10,000	0	23,700	20	0	0
	Total	4766	209.28	1,294,787	402,892	161,204	2,644	3,376,466	9,603

Source: MNRE PM KUSUM portal accessed on June 20, 2024 https://pmkusum.mnre.gov.in/landing.html

19. Wainganga-Nalganga River Linking Project

News:

Nalganga-Wainganga river linking cost up ₹34k cr; launch in a year

Shishir Arya / Aug 9, 2024, 04:54 IST

SHARE AA FOLLOW US

The Wainganga-Nalganga (Purna Tapi) River linking project will irrigate 3.7 lakh hectare of agricultural land in six districts in Vidarbha region.

The project entails lifting water from the Gosikhurd dam **on Wainganga River** in Bhandara and channeling it into the Nalganga river in Buldhana through a 427-kilometre-long network of canals, pipelines, and lift irrigation.

The Wainganga is a river in India originating in the Mahadeo Hills in Mundara in Gondwana region near the village Gopalganj in Seoni, Madhya Pradesh. **It is a key tributary of the Godavari.**

The project will supplement the National River Linking Project (NRLP).

About NRLP

NRLP is based on the National Perspective Plan (NPP) which was prepared by the then Ministry of Irrigation (now Ministry of Jal Shakti) in 1980 for transferring water from water surplus basins to water-deficit basins.

Under the NPP, the NWDA has identified 30 links (16 under Peninsular Component & 14 under Himalayan Component) for Feasibility Reports.

In 2021, Union Cabinet approved the implementation of **Ken Betwa River link - first interlinking of rivers project.**

20. United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)

News:

The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) was adopted by the General Assembly on Thursday, 13 September 2007, by a majority of 143 states in favour, 4 votes

against (Australia, Canada, New Zealand and the United States) and 11 abstentions (Azerbaijan, Bangladesh, Bhutan, Burundi, Colombia, Georgia, Kenya, Nigeria, Russian Federation, Samoa and Ukraine).

Years later the four countries that voted against have reversed their position and now support the UN Declaration.

Today the Declaration is the most comprehensive international instrument on the rights of indigenous peoples. It establishes a universal framework of minimum standards for the survival, dignity and well-being of the indigenous peoples of the world and it elaborates on existing human rights standards and fundamental freedoms as they apply to the specific situation of indigenous peoples.

❖ **Some highlights of the Declaration**

- Seventeen of the forty-five articles of the Declaration deal with indigenous culture and how to protect and promote it, by respecting the direct input of indigenous peoples in decision-making, and allowing for resources, such as those for education in indigenous languages and other areas.
- Fifteen of the forty-six articles of the Declaration are about indigenous peoples' participation in all decisions that will affect their lives, including meaningful participation in a democratic polity.
- The Declaration confirms the right of indigenous peoples to self-determination and recognizes subsistence rights and rights to lands, territories and resources.
- The Declaration recognizes that indigenous peoples deprived of their means of subsistence and development are entitled to just and fair redress.
- Essentially, the Declaration outlaws discrimination against indigenous peoples, promotes their full and effective participation in all matters that concern them, as well as their right to remain distinct and to pursue their own visions of economic and social development.

Is the Declaration legally binding?

UN Declarations are generally not legally binding; however, they represent the dynamic development of international legal norms and reflect the commitment of states to move in certain directions, abiding by certain principles. The Declaration, however, is widely viewed as not creating new rights. Rather, it provides a detailing or interpretation of the human rights enshrined in other international human rights instruments of universal resonance –as these apply to indigenous peoples and indigenous individuals. It is in that sense that the Declaration has a binding effect for the promotion, respect and fulfillment of the rights of indigenous peoples worldwide. The

Decade of Indigenous Languages 2022 – 2032

At least 40% of the 7,000 languages used worldwide are at some level of endangerment. Indigenous languages are particularly vulnerable because many of them are not taught at school or used in the public sphere. This year, we start another important milestone to advocate for indigenous cultures: the Decade of Indigenous Languages (2022 – 2032).

21. A no confidence motion against Vice president.

News:

Opposition parties prepare to move no-confidence motion against Vice-President

About 50 MPs have come together on the decision, saying they should be given the space and time to speak, that the House should be run on rules and convention and that Jagdeep Dhankhar must refrain from personal remarks against members

Updated – August 09, 2024 11:05 pm IST Published – August 09, 2024 09:36 pm IST – New Delhi

Just read Article 67(B) of the Indian Constitution:

1. The resolution must be passed by 50 per cent of the present members, plus one member, of those present in the House on that day.
2. The Lok Sabha must also agree to the resolution with a simple majority.
3. No resolution can be moved unless at least 14 days advance notice has been given.

67. Term of office of Vice-President.—The Vice-President shall hold office for a term of five years from the date on which he enters upon his office:

Provided that—

(*a*) a Vice-President may, by writing under his hand addressed to the President, resign his office;

(*b*) a Vice-President may be removed from his office by a resolution of the Council of States passed by a majority of all the then members of the Council and agreed to by the House of the People; but no resolution for the purpose of this clause shall be moved unless at least fourteen days' notice has been given of the intention to move the resolution;

(*c*) a Vice-President shall, notwithstanding the expiration of his term, continue to hold office until his successor enters upon his office.

If you focus on the above article, there is nowhere mentioned the term "chairman of Rajya Sabha". Everywhere it is mentioning Vice President. It is the Vice-President who can be removed from the office of the Chairperson of Rajya Sabha, and not the Chairperson of Rajya Sabha as a separate entity.

While a resolution to remove vice President is under consideration: HE WILL NOT PRESIDE.

92. The Chairman or the Deputy Chairman not to preside while a resolution for his removal from office is under consideration.—(1) At any sitting of the Council of States, while any resolution for the removal of the Vice-President from his office is under consideration, the Chairman, or while any resolution for the removal of the Deputy Chairman from his office is under consideration, the Deputy Chairman, shall not, though he is present, preside, and the provisions of clause (2) of article 91 shall apply in relation to every such sitting as they apply in relation to a sitting from which the Chairman, or, as the case may be, the Deputy Chairman, is absent.

22. Clean Plant Programme under Mission for Development of Horticulture

News:

Cabinet approves the Clean Plant Programme under Mission for Integrated Development of Horticulture

Ambitious Clean Plant Programme to revolutionize horticulture sector in the country

Posted On: 09 AUG 2024 10:17PM by PIB Delhi

The Union Cabinet, chaired by the Prime Minister Shri Narendra Modi, **approved the Clean Plant Programme (CPP) proposed by the Ministry of Agriculture and Farmers Welfare.**

With a substantial investment of Rs.1,765.67 crore, this pioneering initiative is set to revolutionize the horticulture sector in India and expected to set new standards for excellence and sustainability.

Key Benefits of the Clean Plant Programme (CPP):

1. **Farmers:** The CPP will provide access to virus-free, high-quality planting material, leading to increased crop yields and improved income opportunities.
2. **Nurseries:** Streamlined certification processes and infrastructure support will enable nurseries to efficiently propagate clean planting material, fostering growth and sustainability.
3. **Consumers:** The initiative will ensure that consumers benefit from superior produce that is free from viruses, enhancing the taste, appearance, and nutritional value of fruits.
4. **Exports:** By producing higher-quality, disease-free fruits, India will strengthen its position as a leading global exporter.
5. The Programme **will prioritize affordable access to clean plant material for all farmers**.
6. The Programme will **actively engage women farmers in its planning and implementation**.

Core Components of the CPP:

Clean Plant Centers (CPCs): Nine world class state-of-the-art CPCs, equipped with advanced diagnostic therapeutics and tissue culture labs, will be established across India. These include Grapes (NRC, Pune), Temperate Fruits - Apple, Almond, Walnuts etc. (CITH, Srinagar & Mukteshwar), etc.,

These centers will play a crucial role in producing and maintaining virus-free planting material meant for larger propagation.

Certification and Legal Framework: A robust certification system will be implemented, supported by a regulatory framework under the Seeds Act 1966, to ensure thorough accountability and traceability in planting material production and sale.

Enhanced Infrastructure: Support will be provided to large-scale nurseries for the development of infrastructure, facilitating the efficient multiplication of clean planting material.

23. Chhattisgarh govt. to develop fourth tiger reserve in State

News:

Chhattisgarh govt. to develop fourth tiger reserve in State

Currently, Chhattisgarh has three tiger reserves — Indravati in Bijapur district, Udanti-Sitanadi in Gariaband and Achanakmar in Mungeli

Updated - August 08, 2024 06:20 am IST Published - August 08, 2024 05:14 am IST - Raipur

The Chhattisgarh government announced that it would establish a new tiger reserve, making it the **fourth such reserve in the forest-rich State- The Guru Ghasidas-Tamor Pingla Tiger Reserve in Chhattisgarh will span 2,829.387 sq.km.**

Currently, Chhattisgarh has three tiger reserves — Indravati in Bijapur district, Udanti-Sitanadi in Gariaband and Achanakmar in Mungeli.

Now, this is important:

How are tiger reserves notified?

Tiger Reserves are notified by State Governments as per provisions of Section 38V of the Wildlife (Protection) Act, 1972 on advise of the National Tiger Conservation Authority.

The following steps are involved in the notification:

(a) Proposal is obtained from the State.

(b) In-principle approval is communicated from the National Tiger Conservation Authority, soliciting detailed proposals under section 38V of the Wildlife (Protection) Act, 1972.

(c) National Tiger Conservation Authority recommends the proposal to the State after due diligence.

(d) The State Government notifies the area as a Tiger Reserve.

24. Large shallow gas in South China Sea

News:

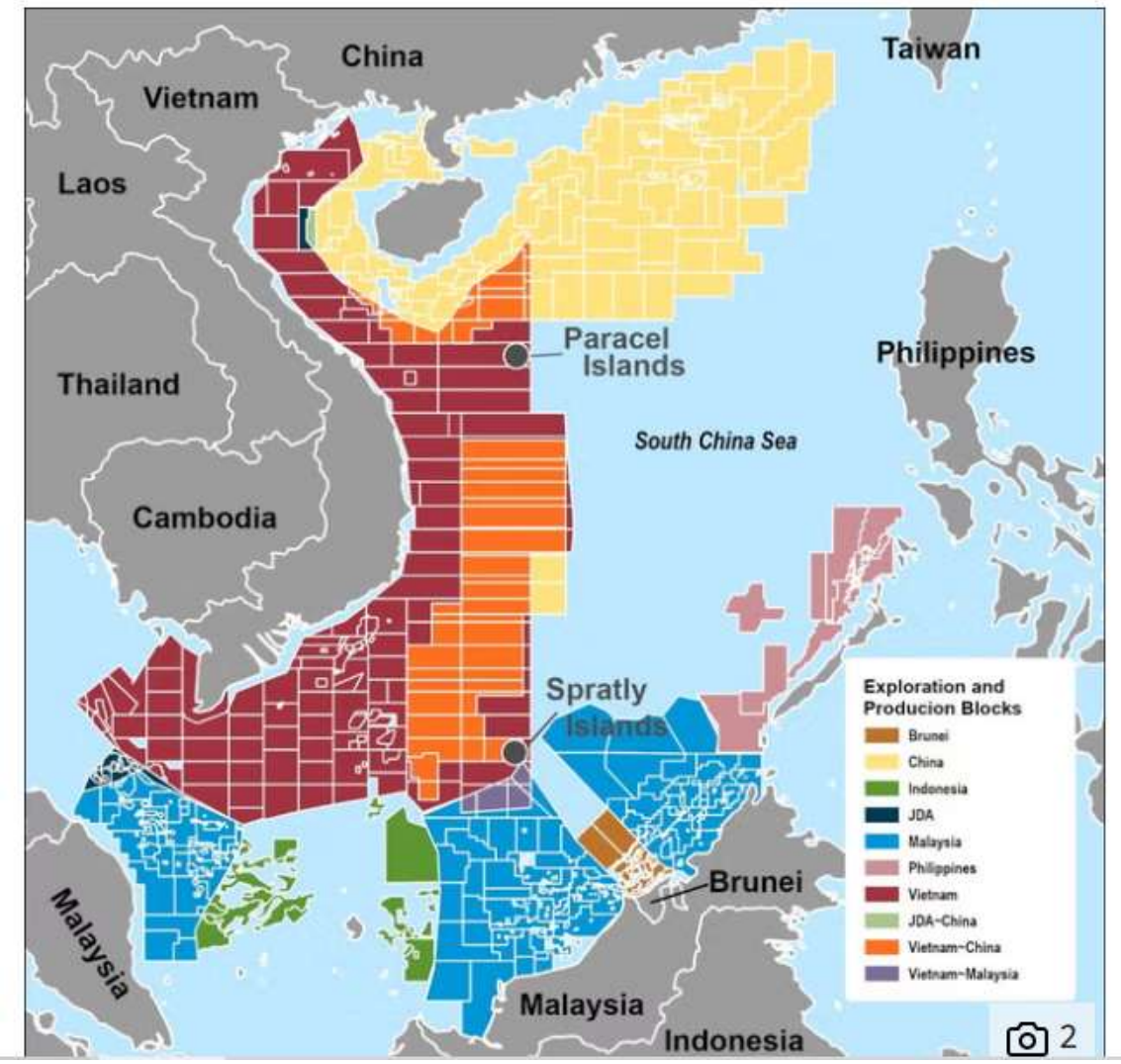
China just discovered a major gas field in South China Sea. This new find, described as the world's first "ultra-shallow gas field in ultra-deep waters", is estimated to contain more than 100 billion cubic metres (bcm) of natural gas, according to China's state media.

The Lingshui 36-1 gas field, labelled as the world's first large, ultra-shallow gas field in ultra-deep waters, is located southeast of Hainan, China's southernmost island province.

The discovery adds to China's already substantial reserves of gas in the South China Sea, which, together with other offshore fields, have now surpassed the trillion-cubic-metres mark.

However, the South China Sea, known for its rich deposits of hydrocarbons, **has also been a focal point of intense territorial disputes involving several countries.**

China's claim to almost the entirety of the South China Sea, demarcated by the so-called "nine-dash line", overlaps those of Vietnam, the Philippines, Malaysia, Brunei, and Taiwan.



25. Pradhan Mantri Awas Yojana-Urban (PMAY-U) 2.0

News:

Cabinet approves Pradhan Mantri Awas Yojana-Urban 2.0 Scheme

09 Aug, 2024

The Union Cabinet, chaired by Prime Minister Shri Narendra Modi, **has approved the Pradhan Mantri Awas Yojana-Urban (PMAY-U) 2.0.** This ambitious scheme **aims to construct 1 crore houses for urban poor and middle-class families over the next five years,** with an investment of ₹10 lakh crore and a government subsidy of ₹2.30 lakh crore.

Scope and Vision

PMAY-U 2.0 is designed to extend financial assistance to urban poor and middle-class families for **constructing, purchasing, or renting** houses at affordable costs in urban areas. This initiative aligns with the Government of India's vision to ensure that every citizen has access to a pucca house, thereby enhancing their quality of life.

Impact

The scheme aims to benefit **1 crore families**, with a particular focus on equity among different segments of the population. Special attention will be given to marginalized groups, including **slum dwellers, SC/STs, minorities, widows, persons with disabilities, and other underprivileged sections of society**. Additionally, groups like **Safai Karmi, street vendors, artisans, anganwadi workers, and residents of slums/chawls** will receive focused support under this scheme.

Eligibility Criteria

The PMAY-U 2.0 scheme is open to families belonging to the **Economically Weaker Section (EWS), Low Income Group (LIG), and Middle Income Group (MIG)** segments who do not own a pucca house anywhere in the country. The income criteria for eligibility are as follows:

- EWS households: Annual income up to ₹3 lakh.
- LIG households: Annual income from ₹3 lakh to ₹6 lakh.
- MIG households: Annual income from ₹6 lakh to ₹9 lakh.

Funding Mechanism

The cost of house construction under PMAY-U 2.0 will be shared among the Ministry, State/ UT/ULBs, and beneficiaries, with varying cost-sharing patterns depending on the region. The sharing pattern is tabulated below:

S. No.	States/UTs	PMAY-U 2.0 Verticals		
		BLC & AHP	ARH	ISS
1.	North-Eastern Region States, Himachal Pradesh, Uttarakhand and Union Territory (UT) of J&K, Puducherry and Delhi	Central Govt.- ₹2.25 lakh per unit State Govt.- Min. ₹0.25 lakh per unit	Technology Innovation Grant GoI: ₹3,000/Sqm per unit State Share: ₹2,000/Sqm per unit	Home Loan Subsidy – up to ₹1.80 lakh (Actual Release) per unit by Government of India as Central Sector Scheme
2.	All other UTs	Central Govt. - ₹2.50 lakh per unit		
3.	Remaining States	Central Govt. - ₹1.50 lakh per unit State Govt.- Min. ₹1.00 lakh per unit		

Technology & Innovation Sub-Mission (TISM)

A TISM will be established under PMAY-U 2.0 to guide the adoption of modern, innovative, and green technologies for faster and higher-quality construction of houses. This initiative will promote disaster-resistant and climate-smart housing solutions across India.

26. Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC)

News:

First BIMSTEC Business Summit (August 06-08, 2024)

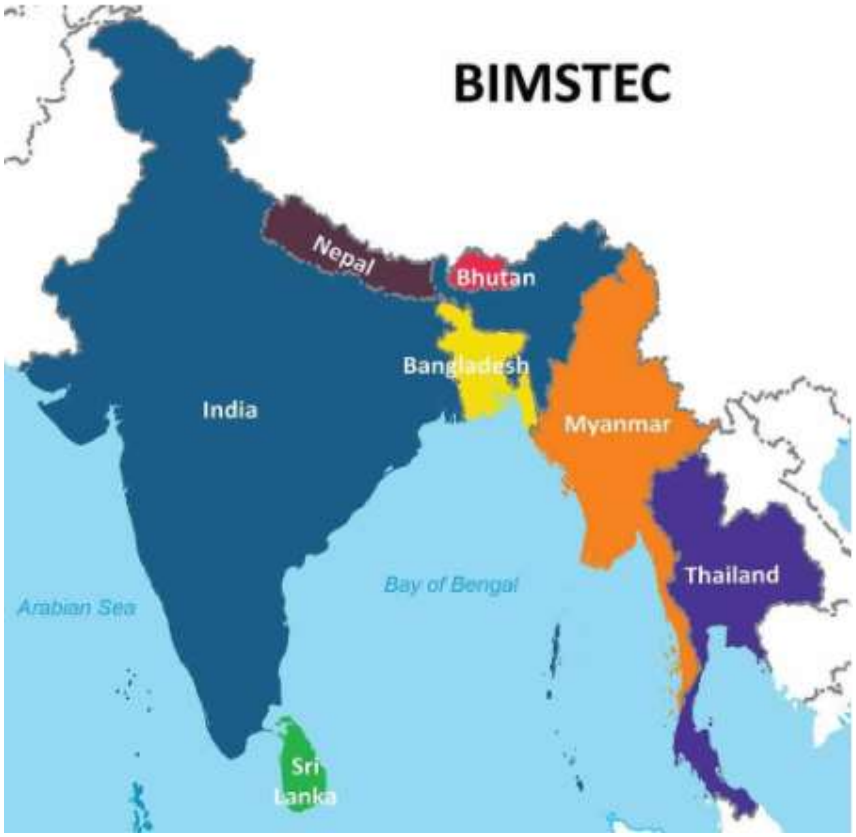
August 05, 2024

A small introduction:

The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) is a regional organization comprising seven Member States lying in the littoral and adjacent areas of the Bay of Bengal.

a. This sub-regional organization came into being on **6 June 1997 through the Bangkok Declaration.**

b. It constitutes **seven Member States: five deriving from South Asia, including Bangladesh, Bhutan, India, Nepal, Sri Lanka, and two from Southeast Asia, including Myanmar and Thailand.**



c. Initially, the economic bloc was formed with four Member States with the acronym 'BIST-EC' (Bangladesh, India, Sri Lanka and Thailand Economic Cooperation). Following the inclusion of Myanmar on 22 December 1997 during a special Ministerial Meeting in Bangkok, the Group was renamed 'BIMST-EC' (Bangladesh, India, Myanmar, Sri Lanka and Thailand Economic Cooperation).
d. With the admission of Nepal and Bhutan at the 6th Ministerial Meeting (February 2004, Thailand), the name of the grouping was changed to 'Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation' (BIMSTEC).

Importance of BIMSTEC:

It aims to accelerate economic growth and social progress among members across multiple sectors — trade, technology, energy, transport, tourism and fisheries, agriculture, public health, poverty alleviation, counter-terrorism, environment, culture, people to people contact and climate change.

The regional group constitutes a bridge between South and South East Asia and represents a reinforcement of relations among these countries.

BIMSTEC has also established a platform for **intra-regional cooperation between SAARC and ASEAN** members. The BIMSTEC region is home to around 1**.5 billion people** which constitute around **22% of the global population** with a combined gross domestic product (GDP) of **2.7 trillion economy.**

BIMSTEC Secretariat

After a span of 17 years of the founding of BIMSTEC as a regional organization, it's long cherished Permanent Secretariat was established in **Dhaka, Bangladesh on 13th September 2014** to serve the BIMSTEC Member States.

BIMSTEC Summit: Only five BIMSTEC Summits till now

This is the highest policy making body in the BIMSTEC process.

No.	Date	Host country	Host city
1st	31 July 2004	Thailand	Bangkok
2nd	13 November 2008	India	New Delhi
3rd	4 March 2014	Myanmar	Naypyidaw[23]
4th	30–31 August 2018	Nepal	Kathmandu[24][2][25]
5th	30 March 2022	Sri Lanka	Colombo (Virtual meeting)[26]

27. World Lion Day

News:

Ministry of Environment, Forest and Climate Change

World Lion Day

Posted On: 09 AUG 2024 10:40AM

World Lion Day was initiated by Big Cat Rescue, the world's largest accredited sanctuary dedicated to big cats. **Celebrated on August 10th**, it is a day for people to come together from across the globe to pay tribute to the mighty lion.

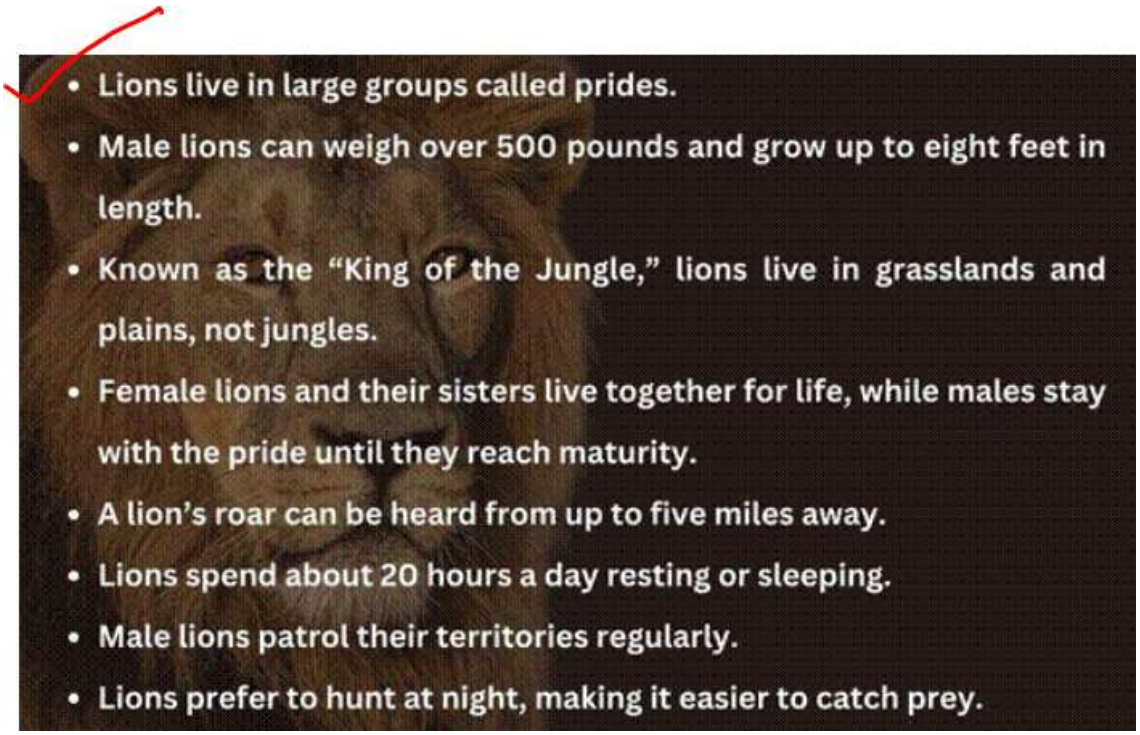
The Importance of Saving Lions

a. Lions are apex predators, playing a vital role in maintaining the ecological balance.
b. **By controlling the populations of herbivores**, they ensure the health and regeneration of forests and grasslands.
c. This balance is crucial for biodiversity, as it helps protect various species and their habitats.
d. Additionally, **lions help prevent the spread of diseases** within prey populations by targeting the weakest members, thus promoting a healthier ecosystem.

e. In India, the conservation of lions holds significant **cultural and ecological importance**.
f. The lion is an integral part of **India's national emblem**, symbolizing strength and power. This emblem appears on all Indian currency and official documents, underscoring the lion's significance in Indian heritage.

India is home to the Asiatic lion, found only in the Gir Forest. Conservation efforts in this region have seen the lion population grow from around 523 in 2015 to approximately 674 in 2020, a testament to the success of dedicated protection measures.

Some facts:



Project Lion

Announced on August 15, 2020, 'Project Lion' is a pivotal initiative aimed at securing the future of Asiatic lions. Key components of the initiative include habitat improvement, monitoring through advanced technologies like radio-collaring and camera traps, and addressing human-wildlife conflict.

The International Big Cats Alliance

Launched in April 2023, the International Big Cats Alliance (IBCA) reinforces the global commitment to conserving big cats, including lions. This alliance aims to foster international cooperation among 97 range countries, facilitating the sharing of knowledge and resources to protect these majestic animals.

As of March 2024, the International Union for Conservation of Nature (IUCN) lists the Asiatic lion *(Panthera leo persica)* **as vulnerable on its Red List,** which is a significant improvement from its previous endangered status.

28. Conference of Central and State Statistical Organizations (COCSSO)

News:

Ministry of Statistics & Programme Implementation

Inaugural session of 28th Conference of Central and State Statistical Organizations (CoCSSO) held on 12th August 2024 in New Delhi

Theme: Use of Data for Decision Making- Strengthening State Statistical Systems

Posted On: 12 AUG 2024 1:26PM by PIB Delhi

Ministry of Statistics and Programme Implementation (MoSPI) organized 28th Conference of Central and State Statistical Organizations (CoCSSO) during 12th-13th August, 2024 at Dr. Ambedkar International Centre, Janpath, New Delhi.

It is being attended by the representatives of Central Ministries/Departments, State/UT Governments, World Bank, UN agencies and other stakeholders.
This Conference provides an institutional platform for **discussion and improved coordination between the Central and State Statistical organizations** for enhancing the efficiency of the Indian Statistical System in a collaborative approach.

The theme of discussion of the conference, "***Use of Data for Decision Making: Strengthening State Statistical Systems,"*** aims to facilitate exchange of ideas, best practices, discussion on issues of common interest and the way forward.

In order to strengthen the coordination of statistical activities among the **Ministry of Statistics and Programme Implementation**, other Central Ministries and State Statistical Organisations, the Conference of Central and State Statistical Organisations (COCSSO) was organized for the first time in the year 1971.

Earlier it was supposed to be organized once in every two years. keeping in view the usefulness of the Conference, **it has now been decided to have it every year.**

The objectives of the conference are:

- To provide a platform for discussion on the statistical issues of common interest to the Central and the State Statistical Organistions;
- To provide an overall perspective to the development of statistical system and to make recommendations/suggestions on issues having bearing on the development of the statistical system;
- To solve the technical issues relating to statistics;
- To set up Working Groups on specific issues/tasks relating to official statistics;
- To provide guidelines in the collection of statistics and maintenance of statistical standards and quality, besides uniformity in statistical standards;
- To consider the Action Taken Report of the follow up action on the recommendations of the previous meetings(s) of COCSSO; and
- To review the role of the Statistical Advisers in the Central and States/UT Governments.

Conference of Central and State Statistical Organizations (COCSSO)

Constitution & Mandate of Standing Committee

The Standing Committee for COCSSO, to be constituted every year, would have the following constitution:		
1.	Secretary, MOS&PI and the Chief Statistician of India	Chairman

29. Release of Publication “Women and Men in India 2023”: Part 1 (Health)

News:

Ministry of Statistics & Programme Implementation

Release of Publication “Women and Men in India 2023”

Posted On: 12 AUG 2024 5:31PM by PIB Delhi

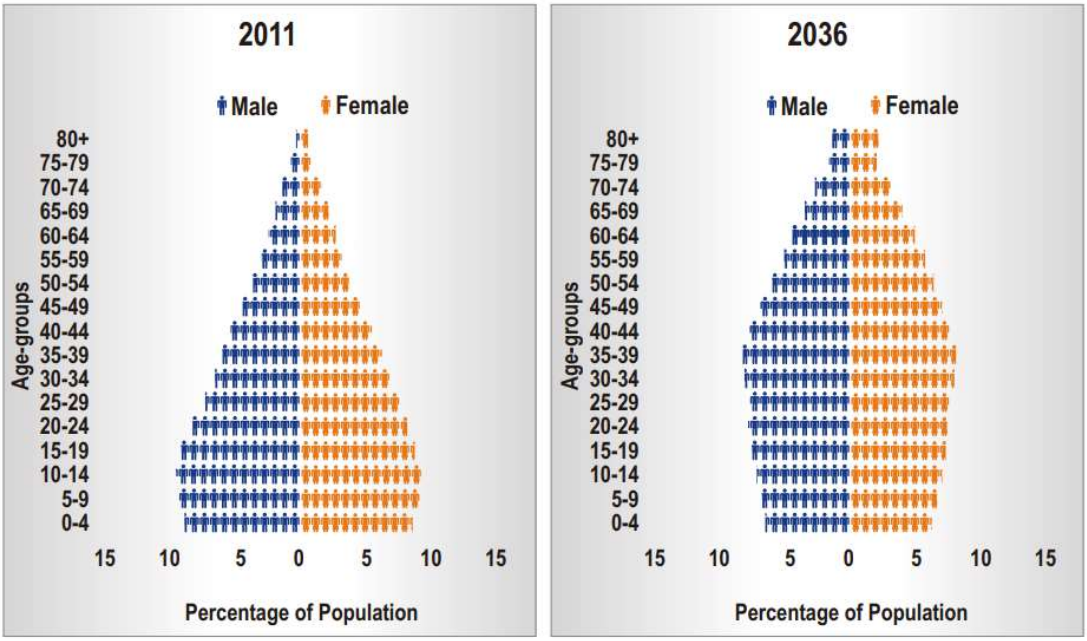
Ministry of Statistics and Programme Implementation (MoSPI), Government of India, released the 25th issue of its publication titled “Women and Men in India 2023”.

Some important highlights of the publication:

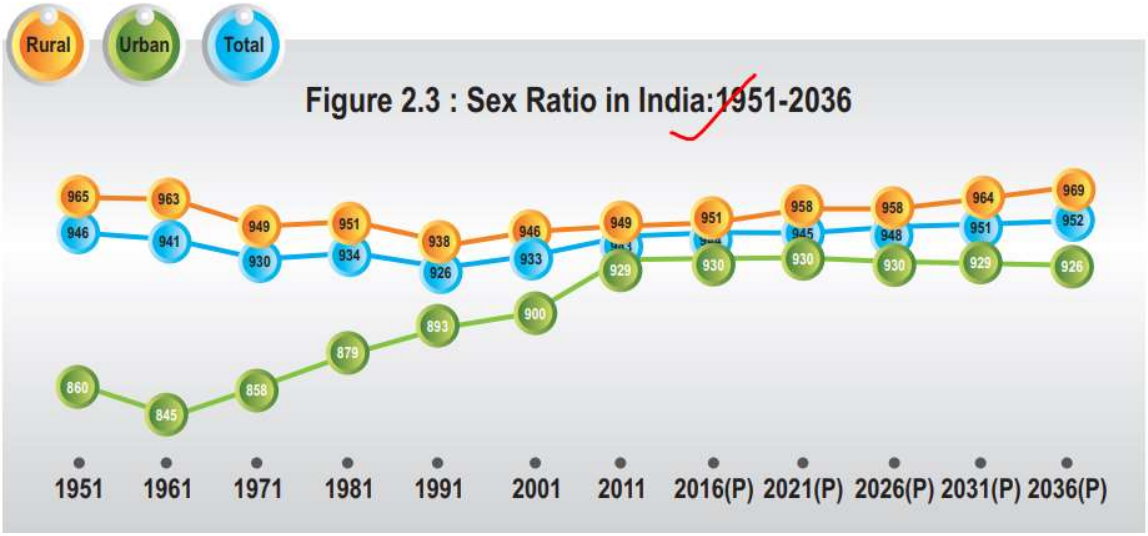
According to the 2011 Census, India's population stood at 121.1 Crore, with 48.5% being female. By 2036, it is expected to reach 152.2 Crore, with a slightly improved female percentage of 48.8%.

The proportion of individuals under 15 years is projected to decrease from 2011 to 2036, likely due to declining fertility. Conversely, the proportion of the population aged 60 years and above is anticipated to substantially increase during this period.

Figure 2.1 : Age-wise profile of population by sex (%)



India's population in 2036 is expected to be more feminine compared to the 2011 population, as reflected in the sex ratio which is projected to increase from 943 in 2011 to 952 by 2036, highlighting a positive trend in gender equality.



ASFR are useful in understanding the age pattern of fertility. It is evident that from 2016 to 2020, ASFR in the age group of 20-24 and 25-29 has reduced which may probably be because of the awareness of economic independency by attaining proper education and securing a job.

Age-Specific Fertility Rate is defined as the number of live births in a specific age group of women per thousand female populations of that age group

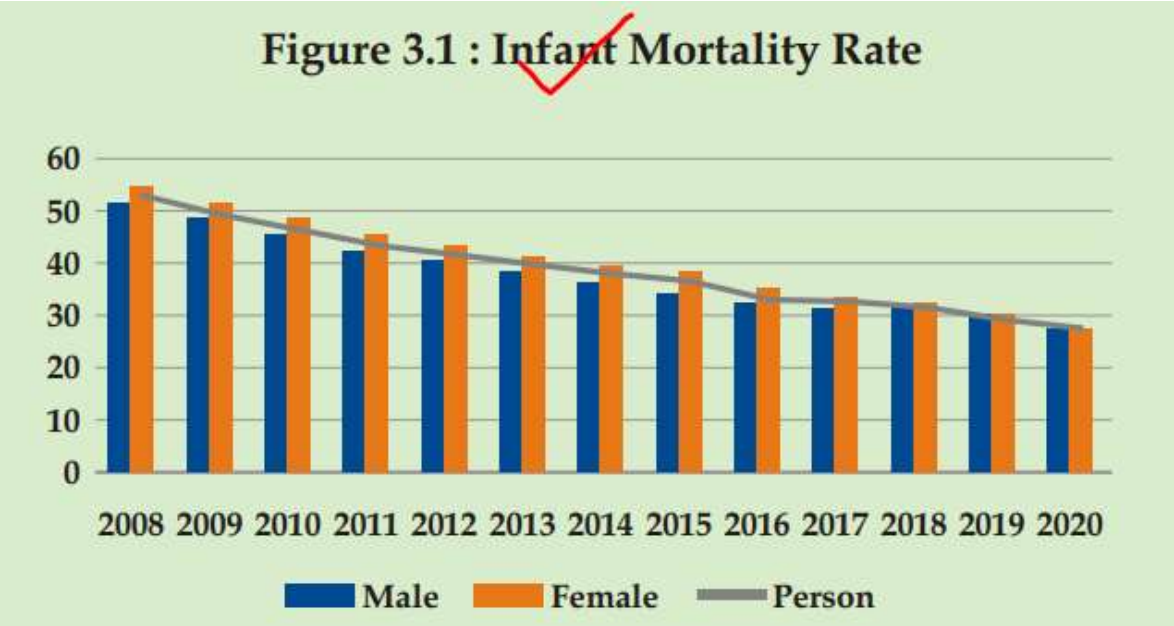
$$\text{ASFR} = \frac{\text{No. of Live Births in a particular age-group}}{\text{Mid-Year Female Population of the same age-group}} * 1000$$

The Total Fertility Rate (TFR) is a useful measure for examining the overall level of fertility. It may be noted that TFR has reduced from 2.3 in 2016 to 2.0 in 2020, slightly lower than the replacement level fertility.

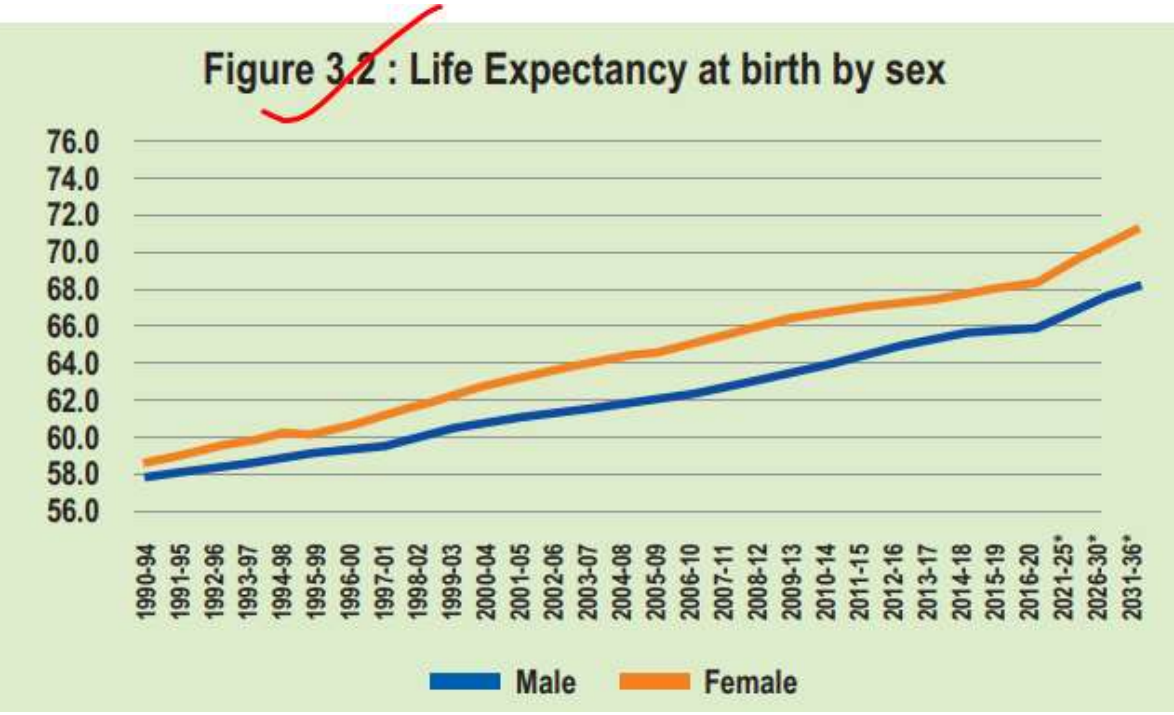
Total fertility rate is defined as the average number of children expected to be born per woman during her entire span of reproductive period assuming that the age specific fertility rates, to which she is exposed to, continue to be the same and that there is no mortality

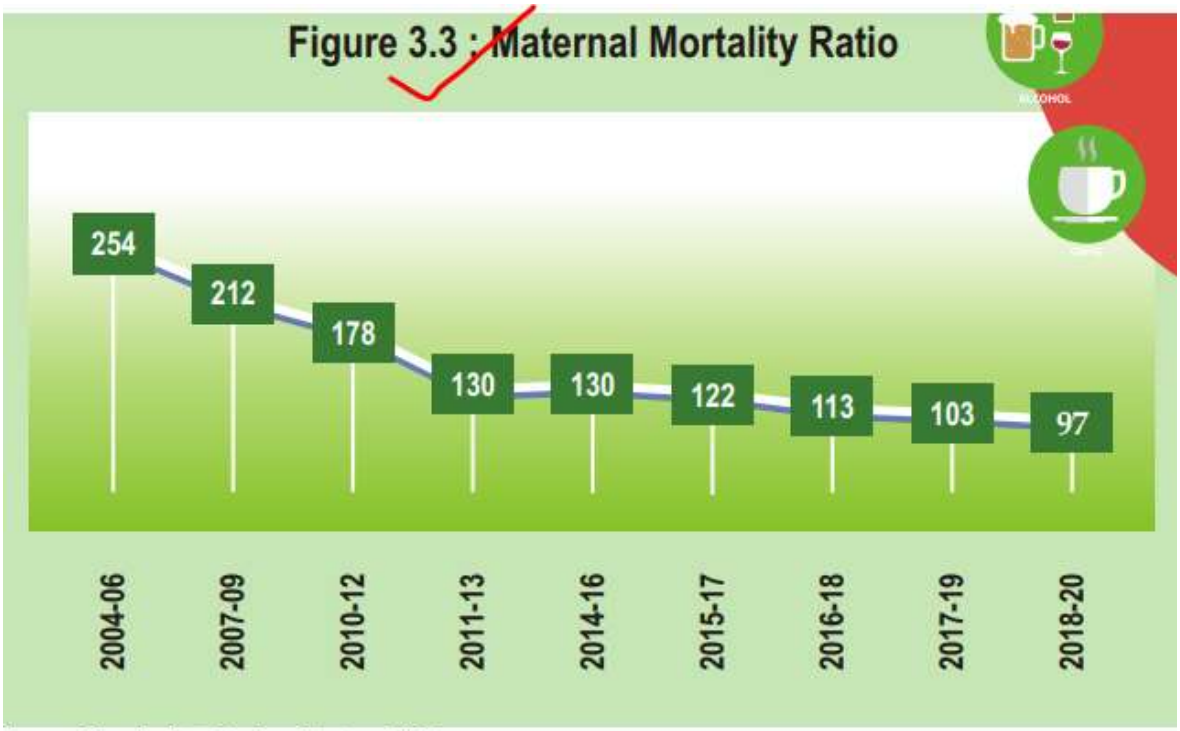
Infant mortality Rate refers to the measurement of mortality in the first year of life and is computed by (relating) the number of deaths under one year of age divided by 1000 live births in a given year

$$\text{Infant Mortality Rate (IMR)} = \frac{\text{Number of infant deaths during the year}}{\text{Number of live births during the year}} \times 1000$$



From 1990 onwards, the life expectancy has been steadily increasing and has reached 68.6 and 71.4 years for males and females respectively during 2016-20 and is expected to reach 71.2 and 74.7 years respectively by 2031-36.

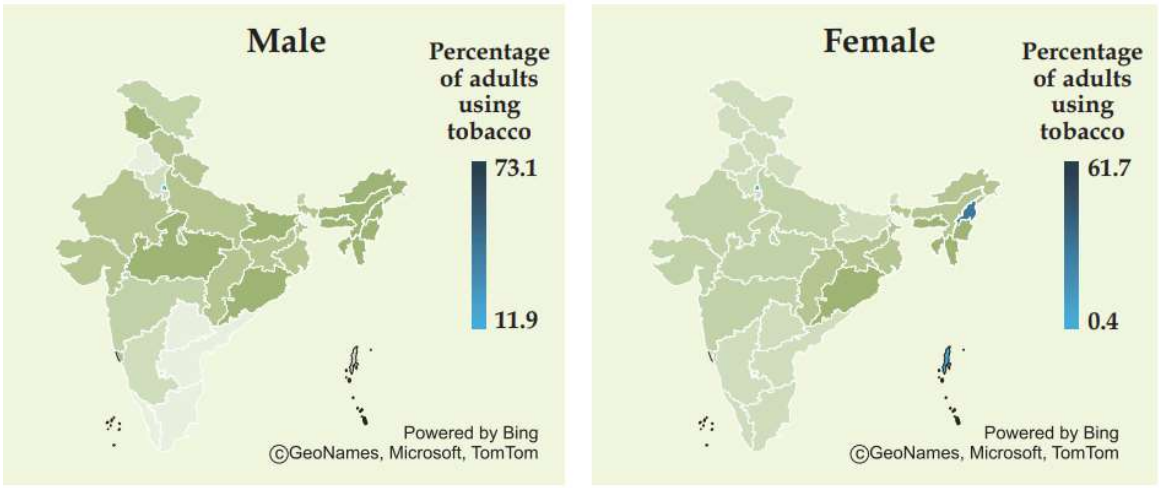




Source: Sample Registration System, RGI

Maternal Mortality Ratio (MMR) refers to the number of women who die as a result of complications of pregnancy or childbearing in a given year per 100,000 live births in that year

Figure 3.4 : Tobacco usage by Adults



Source: National Family Health Survey (NFHS) 2019-21, M/o HFW

Tomorrow we will cover education part. It's a big report.

30. National Institutional Ranking Framework (NIRF) 2024

News:

Employability Skills and Intangible Aspects to Be Key Parameters in the Rankings – Shri Dharmendra Pradhan

All 58,000 Indian HEIs Must Be Included in Ranking and Rating Framework Rankings – Shri Dharmendra Pradhan

The National Institutional Ranking Framework (NIRF) has been accepted by the MoE and launched by Honourable Minister for Education on 29th September 2015. This framework outlines a methodology to rank institutions across the country.

It is a ranking methodology released annually to rank institutions of higher education in India.

Depending on their areas of operation, institutions have been ranked under 11 different categories – *overall, university, colleges, engineering, management, pharmacy, law, medical, architecture, dental and research.*

The framework:

The Framework uses several parameters for ranking purposes like resources, research, and stakeholder perception. These parameters have been grouped into five clusters and these clusters were assigned certain weights. These weights depend on the type of institution.

Five broad categories of parameters identified in the NIRF and their weightage on scale of 10 are given below:

Sl. No.	Parameter	Marks	Weightage
1	Teaching, Learning & Resources	100	0.30
2	Research and Professional Practice	100	0.30
3	Graduation Outcome	100	0.20
4	Outreach and Inclusivity	100	0.10
5	Perception	100	0.10

Ranking:

India Rankings 2024: Overall

Rank-band: 101-150 | Rank-band: 151-200

Show 100 entries Search:

Institute ID	Name	City	State	Score	Rank
IR-O-U-0456	Indian Institute of Technology Madras More Details	Chennai	Tamil Nadu	86.42	1
IR-O-U-0220	Indian Institute of Science, Bengaluru More Details	Bengaluru	Karnataka	83.28	2
IR-O-U-0306	Indian Institute of Technology Bombay More Details	Mumbai	Maharashtra	81.37	3
IR-O-I-1074	Indian Institute of Technology Delhi More Details	New Delhi	Delhi	80.31	4
IR-O-I-1075	Indian Institute of Technology Kanpur More Details	Kanpur	Uttar Pradesh	77.56	5
IR-O-U-0573	Indian Institute of Technology Kharagpur More Details	Kharagpur	West Bengal	74.77	6
IR-O-N-15	All India Institute of Medical Sciences Delhi More Details	New Delhi	Delhi	74.27	7
IR-O-U-0560	Indian Institute of Technology Roorkee More Details	Roorkee	Uttarakhand	71.52	8
IR-O-U-0053	Indian Institute of Technology Guwahati More Details	Guwahati	Assam	69.04	9
IR-O-U-0109	Jawaharlal Nehru University More Details	New Delhi	Delhi	68.53	10

Certain FAQs about the NIRF

1. Accreditation VS Ranking?

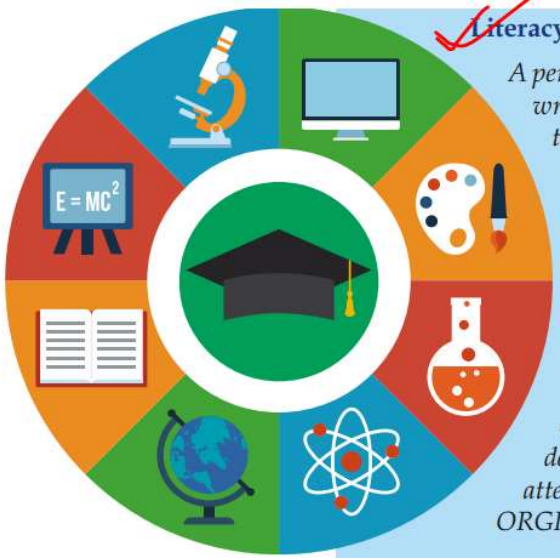
- Accreditation is a 5-year comprehensive assessment of the institution as a whole.
- Ranking is a yearly affair.
- Accreditation gives absolute grade, ranking is relative to the other institutions similarly placed.

2. Since there is already accreditation, should there be ranking too?

- Accreditation is a one-time (5 year) event. Accredited Institutions can slip in their yearly performance.
- Stakeholders are interested in knowing whether the institution is doing better or worse at the end of each year
- Ranking is an Annual Report Card to the Nation and to the stakeholders on what has been done by the institution in the last one year, on the given performance.
- Very few institutions have got the accreditation, whereas ranking is open to all!
- It is due to this reason that across the Countries, there is both accreditation and ranking.

31. Women and Men in India, 2023-Part 2 (Education)

Just go through images:



Literacy

A person aged 7 years and above who can both read and write with understanding in any language was taken as literate. A person, who can only read but cannot write, is not literate. It is not necessary that to be treated as literate, a person should have received any formal education or passed any minimum educational standard. Literacy could also have been achieved through adult literacy classes or through any non-formal educational system. People who are blind and can read in Braille were also treated as literates. All children of age 6 years or less were treated as illiterate by definition, irrespective of their status of school attendance and the capability to read and write - ORGI.

Literacy rate is the percentage of literates among persons of age 7 years and above.

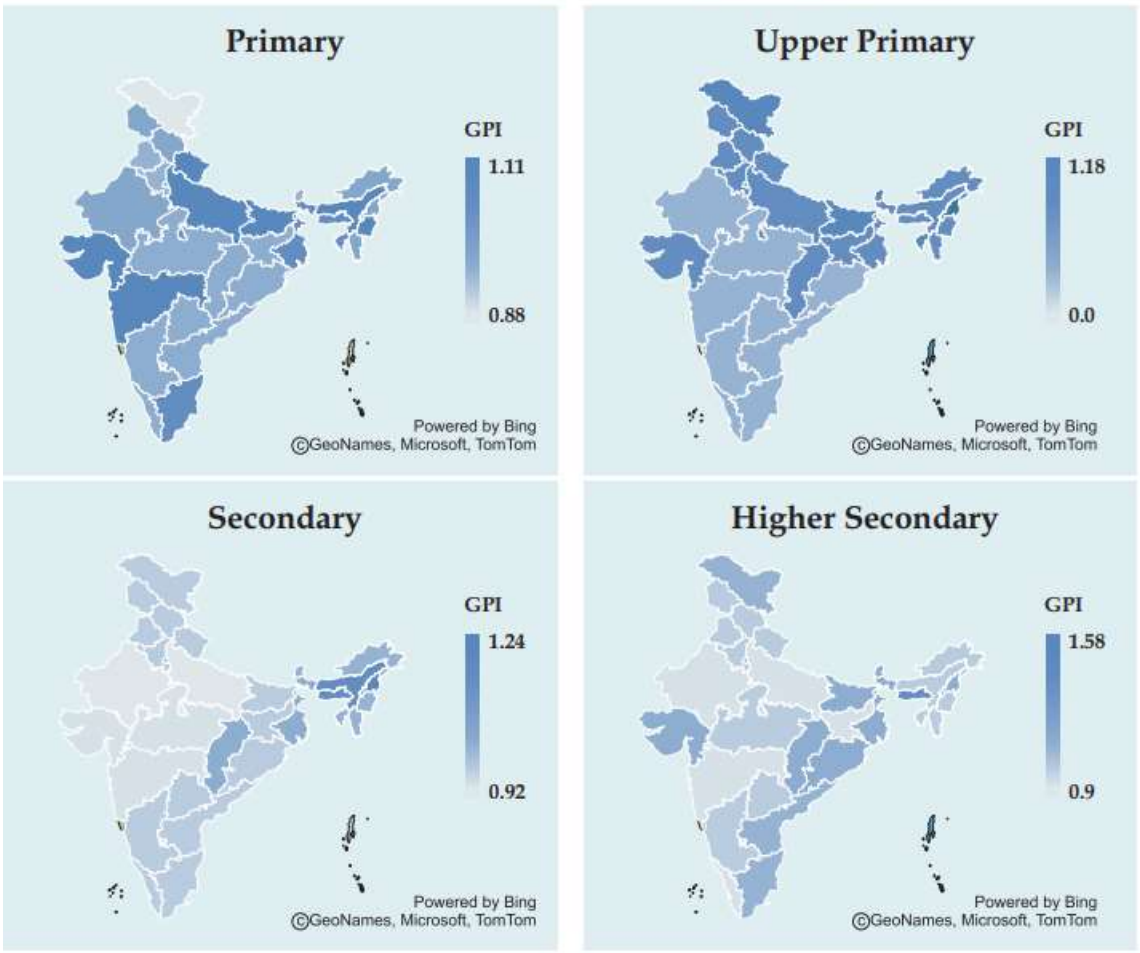
Gross Enrolment Ratio (GER) is defined as the total enrolment in a particular level of school education, regardless of age, expressed as a percentage of the Population of the official age-group which corresponds to the given level of school education in a given school year

$$\text{GERpri level} = \frac{\text{Enrolment in class 1-5}}{\text{Projected Population in age group 6-10}} * 100$$

One important indicator to measure this gender gap is Gender Parity Index.

GPI is measured as Ratio of GER of girls to GER of boys. It measures the progress towards gender parity in education participation and/or learning opportunities available for girls in relation to those available to boys. It also represents the level of girls' empowerment in the society.-MoE

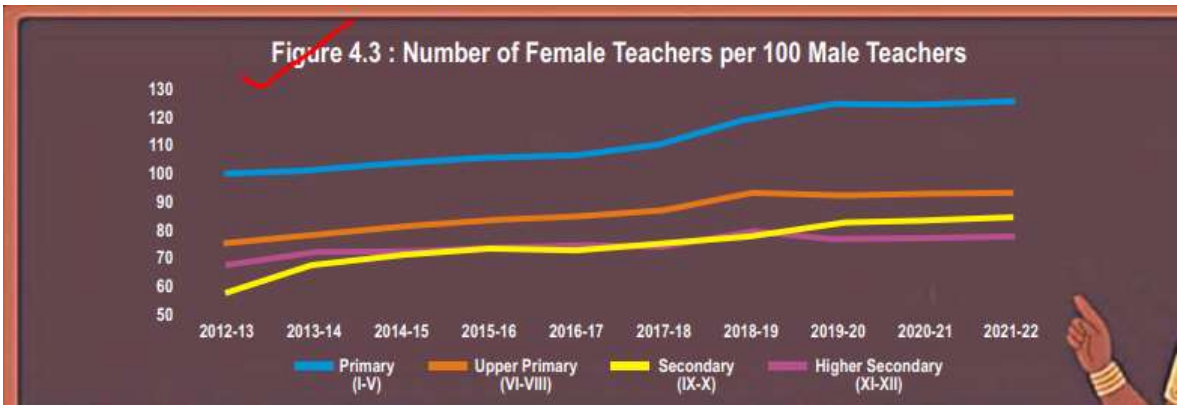
Figure 4.1 : Gender Parity Index (2021-22)



Source: Educational Statistics at Glance and UDISE+, All India Survey on Higher Education, M/o Education

Statement 4.1: Enrolment at under graduate level in major disciplines/Subjects, 2021-22

S.No.	Discipline	Male	Female
1	Arts	55,83,302	57,44,439
2	Science	24,22,049	24,96,376
3	Commerce	23,28,882	20,79,354
4	Engineering & Technology	27,66,697	11,37,819
5	Education	6,46,915	10,72,393
6	Medical Science	7,22,402	9,83,299
7	Social Science	6,35,523	6,49,105
8	IT & Computer	5,79,083	3,48,928
9	Management	5,68,069	3,29,457
10	Law	3,52,791	1,77,658
11	Others	7,43,854	7,59,334
	Total	**1,73,49,567**	**1,57,78,162**



32. 3 more wetlands to the list of Ramsar sites

News:

Ministry of Environment, Forest and Climate Change

Union Environment Minister Shri Bhupender Yadav says India adds 3 more wetlands to the list of Ramsar sites on the eve of Independence Day 2024

India has increased its tally of Ramsar sites (Wetlands of International Importance) **to 85 from existing 82 by designating three more wetlands as Ramsar Sites.**

With this addition, the area of Ramsar sites touched to 1358067.757 ha in the country. The three new sites included are Nanjarayan Bird Sanctuary and Kazhuveli Bird Sanctuary in Tamil Nadu and Tawa Reservoir in Madhya Pradesh.

List of newly designated Ramsar Sites

Sl. No.	Name of Ramsar Site	Date of designation	State	Total area in ha
1	**Nanjarayan Bird Sanctuary**	16.01.2024	Tamil Nadu	125.865
2	**Kazhuveli Bird Sanctuary**	16.01.2024	Tamil Nadu	5151.6
3	**Tawa Reservoir**	08.01.2024	Madhya Pradesh	20050
Total:	25327.465			

India is one of the Contracting Parties to Ramsar Convention, signed in Ramsar, Iran, in 1971. India became a signatory to the convention on 1st February 1982. During 1982 to 2013, a total of 26 sites were added to the list of Ramsar sites, however, during 2014 to 2024, the country has added 59 new wetlands to the list of Ramsar sites.

Currently, Tamil Nadu harbours maximum number of Ramsar Sites (18 sites) followed by Uttar Pradesh (10 sites).

We will see few important points for all three:

Nanjarayan Bird Sanctuary:

The Nanjarayan lake a large shallow wetland situated along the north-eastern region of Uthukuli Taluk of Tiruppur District in Tamil Nadu. The lake got its name from the fact that it was repaired and restored by King Nanjarayan who was ruling the region many centuries ago.

Kazhuveli Bird Sanctuary

The Kazhuveli Bird Sanctuary covering an area of 5151.6 ha was declared as the 16th bird sanctuary in Tamil Nadu in the year 2021. It is a **brackish shallow lake** located on the Coromandel Coast in Villupuram district, North of Pondicherry. **The lake is one of the largest wetlands in peninsular India**.

The lake can be divided into three parts based on the water features viz., the estuarine part with brackish water, the Uppukali creek feeding the sea water and the Kazuveli basin with fresh water.

The Kazhuveli Bird Sanctuary lies in the Central Asian Flyway.

Tawa Reservoir

The Tawa Reservoir has been constructed at the confluence of the Tawa and Denwa rivers. **River Malani, Sonbhadra, and Nagdwari are the major tributaries of Tawa reservoir.**

Tawa River, a left bank tributary originates from Mahadeo hills, flows through Betul district and joins river Narmada. **It is the longest tributary of river Narmada (172 Km).** Tawa Reservoir is situated **near Itarsi town**.

The reservoir is located inside the Satpura Tiger Reserve and forms the western boundary of the Satpura National Park and Bori Wildlife Sanctuary.

33. Prasar Bharati-Shared Audio-Visuals for Broadcast and Dissemination (PB-SHABD)

News:


Ministry of Information & Broadcasting

Prasar Bharati-Shared Audio-Visuals for Broadcast and Dissemination (PB-SHABD): A Comprehensive News Sharing Service

PB-SHABD was launched on March 13, 2024 as a news sharing service designed to provide media organizations with daily news feeds across various formats including video, audio, text, and photos.

Leveraging a robust network of over 1500 reporters, PB-SHABD offers the latest news from every corner of India. More than 1000 stories, covering over 50 news categories such as agriculture, technology, foreign affairs, and political developments, are uploaded daily in all major Indian languages from the Regional News Units (RNUs) and headquarters combined.

Main features of PB-SHABD

The content provided through PB-SHABD is logo-free, and no credit is required on using content from this platform.

Additionally, the service includes a Live Feed feature, offering exclusive coverage of live events such as National award ceremonies from Rashtrapati Bhawan, election rallies, important political events, and various press briefings, **all without a logo.**

About Prasar Bharti:

Prasar Bharati is an autonomous body created by an act of Parliament in 1990. It came into effect in 1997. It is the Public Service Broadcaster of the country. It comprises the Doordarshan television broadcasting and Akashvani (formerly, All India Radio or AIR).

34. Biosurfactants

News:


Ministry of Science & Technology

Safe microbial substitute can replace synthetic surfactants in the food industry

Posted On: 14 AUG 2024 4:49PM by PIB Delhi

Cost-effective biosurfactants, a healthier substitute for synthetic surfactants useful for the food industry, can be produced using green substrates from agro-industrial waste.

About:

Surfactants are molecules **that slither (*to move by sliding from side to side along the ground like a snake*) across surfaces** of oil and water, water and oil, or air and water to form an emulsion.

Surfactants are **very useful in the food industry** as

a. lubricants and foamers to emulsify fats in batters,
b. improve shelf life,
c. as dispersing agents, and retain moisture.

However, the accelerated usage of synthetic food additives and emulsifiers in dietary goods has led to imbalances in the microbiome of the body, gut-related disorders and affect the intestinal barrier permeability leading to declination of beneficial microbiota**. Therefore, an alternative option is essential.**

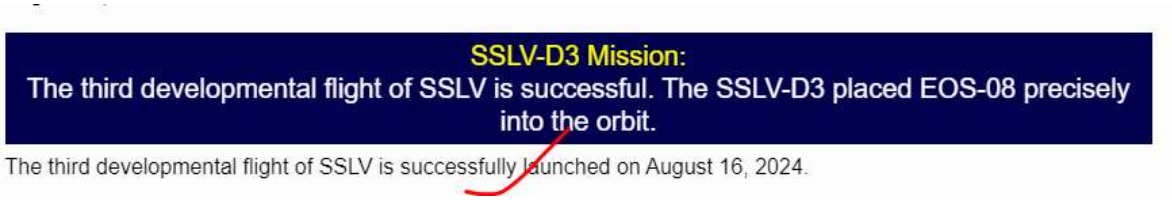
So,

Microbial biosurfactants obtained from various microbial sources:

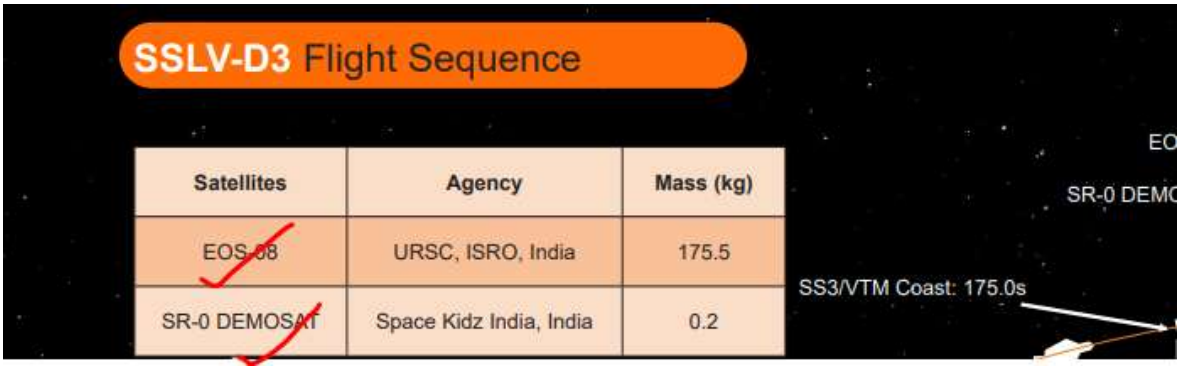
a. exhibit high emulsification, solubilization, foaming, adsorption, and other physical characteristics.
b. Also, they are very stable in a wide range of pH, temperature, and salinity, making them suitable for food applications.
c. Biosurfactants are eco-friendly biomolecules and do not impart toxic effects; therefore, they can be considered safe for human consumption.

35. SSLV-D3/EOS-08 Mission

News:



The smallest launch vehicle of the Indian Space Research Organisation (ISRO) — SSLV (Small Satellite Launch Vehicle) — in its **third and final developmental** flight **placed the EOS-08 and SR-0 satellites** into a precise 475-km circular orbit. With this, the **SSLV will be inducted into the space agency's fleet of operational launch vehicles.**



What is SSLV?

Small Satellite Launch Vehicle (SSLV) can launch Mini, Micro or Nano satellites (10 to 500kg mass) into 500km planar orbit. SSLV is a **three-stage launch vehicle with all solid propulsion stages** and liquid propulsion-based Velocity Trimming Module (VTM) as terminal stage.

SSLV-D3 Stages at a Glance				
	STAGE 1 (SS1)	**STAGE 2 (SS2)**	**STAGE 3 (SS3)**	**VTM**
Length (m)	22.5	3.2	2.8	0.85
Diameter (m)	2	2	1.7	2
Propellant	Solid (HTPB based)	Solid (HTPB based)	Solid (HTPB based)	Liquid (MMH+MON3)
Propellant mass (t)	87	7.7	4.5	0.05
Action Time (s)	114.9	116.0	108.4	-

The key features of SSLV are Low cost, with low turn-around time, flexibility in accommodating multiple satellites, Launch on demand feasibility, minimal launch infrastructure requirements, etc.

I also want you to go through this article, if necessary.

SMALL SATELLITE LAUNCH VEHICLE

SSLV is a new category of low-cost launch vehicles, with a use case for commercial missions

EXPRESS NEWS SERVICE
NEW DELHI, AUGUST 16

THE INDIAN Space Research Organisation (ISRO) successfully launched the third developmental flight of the Small Satellite Launch Vehicle (SSLV) from the Satish Dhawan Space Centre in Sriharikota on Friday. The SSLV-D3 placed the Earth observation satellite EOS-08 precisely into orbit.

This marks the completion of ISRO and the Department of Space's SSLV Development Project. NewSpace India Limited (NSIL), ISRO's commercial arm, and India's private space industry can now produce SSLVs for commercial missions.

What is an SSLV?

ISRO's Small Satellite Launch Vehicle (SSLV) is a three-stage launch vehicle configured with three solid propulsion stages. It also has a liquid propulsion-based velocity trimming module (VTM) as a terminal stage, which can help adjust the velocity as it prepares to place the satellite into orbit.

Essentially, the aim behind SSLVs is to produce low-cost launch vehicles with short turnaround times and minimal infrastructural requirements. The SSLV can launch satellites weighing up to 500kg, and accommodate multiple satellites.

Before SSLVs, smaller payloads had to be sent into space using other launch vehicles carrying multiple, bigger satellites. Smaller payloads were dependent upon the launch schedules of those satellites.

With the entry of more and more businesses, government agencies, universities, and laboratories in the business of launching satellites in recent years, the constraints of such 'piggyback rides' have started to hurt the development of the space sector. These organisations also usually need to launch smaller payloads, aligning with the capabilities of SSLVs.

Former ISRO chairman K Sivan had said in a 2019 press conference in the space agency's headquarters that "The SSLV is the smallest vehicle at 110-ton mass at ISRO. It will take only 72 hours to integrate, unlike the 70 days taken now for a launch vehicle. Only six people will be required to do the job, instead of 60 people. The entire job will be done in a very short time, and the cost [of a launch] will be only around Rs 30 crore. It will be an on-demand vehicle."

What are ISRO's other major rockets?

ISRO has earlier launched payloads using the Polar Satellite Launch Vehicles (PSLVs) and the Geosynchronous Satellite Launch Vehicles (GSLVs).

PSLVs are the third generation of Indian satellite launch vehicles, first used in 1994. More than 50 successful PSLV launches have taken place to date. It has also been called "the workhorse of ISRO" for consistently delivering various satellites into low earth orbits (less than 2,000 km in altitude) with a high success rate. The PSLV-XL can carry around 1,860 kg of payload.

On the other hand, GSLVs have been instrumental in launching communication satellites in the geosynchronous transfer orbit. Telecommunications satellites are usually placed in geostationary Earth orbit (GEO). It is a circular orbit 35,786 kilometres above Earth's equator.

GSLVs have a higher capacity because sending satellites deeper into space requires greater power. Therefore, cryogenic engines consisting of liquid hydrogen and liquid oxygen are used as they provide greater thrust. The GSLV Mk-II can carry satellites weighing up to 2,200 kg, while the Mk-III has a capacity of up to 4,000 kg.

36. Neelakurinji Added to IUCN Red List as Vulnerable Species

News:

Neelakurinji becomes a 'threatened species,' officially

Though considered threatened, the shrub was not evaluated against IUCN global standards until recently. The mass blooming of the flower in the Western Ghats, once in 12 years, attracts tourists in hordes

Updated – August 11, 2024 01:56 am IST Published – August 10, 2024 08:08 pm IST – Thrissur

Neelakurinji (*Strobilanthes kunthiana*), the purplish flowering shrub, which blooms once in 12 years, has been included on the IUCN (International Union for Conservation of Nature) official Red List of threatened species.

This is the first ever Global Red List assessment for this flagship species of the montane grasslands of southwest India.

The latest global assessment confirms **its threatened status in the Vulnerable** (Criteria A2c) category of the IUCN.

About the shrub:

Strobilanthes kunthiana is an **endemic shrub of three-metre height**, seen only in the high-altitude shola grassland ecosystems of five mountain landscapes of southwest India at an elevation of 1,340–2,600 m.

Known for their massive blooming, they impart purplish blue colours to the mountain grasslands and are **popularly known as Neelakurinji (Blue Strobilanthes) blooms**. They are semelparous with showy synchronous blooming and fruiting **at every 12 years at the end of the life cycle**, which has been reported since 1832.

Neelakurinji is threatened mainly due to its fragile habitat in the montane high altitude grasslands that has been under pressure of conversion for tea and softwood plantations, and urbanization.

The species has 34 subpopulations within 14 ecoregions of the high-altitude mountain ranges of southwest India. **There are 33 subpopulations in the Western Ghats and one in the Eastern Ghats (Yercaud, Shevaroy Hills).**

37. Scientists discover plastic-eating fungi

News:

Plastic-eating fungi could be glimmer of hope in cutting ocean pollution

Of 18 selected fungal strains, four proved to be particularly "hungry", which means they could efficiently utilise plastics, especially polyurethane which is used to make construction foam

Published – August 12, 2024 01:03 pm IST

Scientists in Germany have **discovered fungi capable of consuming plastic**, potentially offering a solution to the millions of tonnes of waste that pollute the world's oceans annually.

An analysis at Lake Stechlin in north-eastern Germany into how micro fungi thrive on some plastics with no other carbon source to feed on has clearly demonstrated that some of them are capable of degrading synthetic polymers.

Can fungi solve the plastic crisis?

The fungi's enzyme activity, responsible for breaking down plastic, **is heavily dependent on external factors like temperature and nutrient availability.** This makes them more suitable for controlled environments like sewage treatment plants rather than natural settings.

They can be particularly helpful in areas where traditional recycling methods are less effective.

38. Climate Resilient Agriculture in India

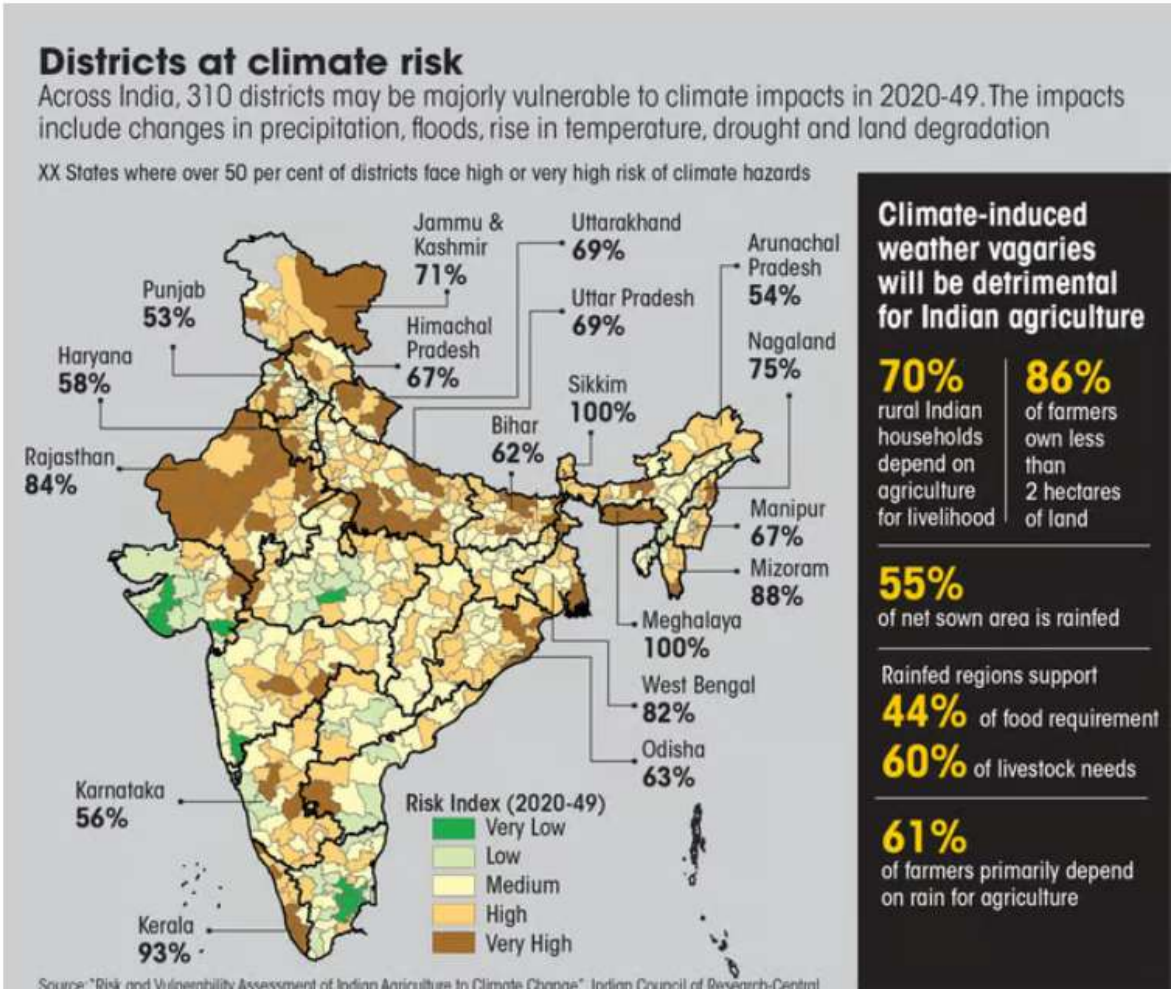
News:


Agriculture

Adaptive agriculture: Technofixes won't help make Indian farmers climate-resilient

In 2011, India launched its first programme to enhance climate resilience of agriculture. The National Initiative on Climate Resilient Agriculture (NICRA), spearheaded by ICAR-Central Research Institute for Dryland Agriculture (CRIDA), aims to improve production and risk management technologies.

It was launched in 151 villages across the country for technology demonstration. **But the programme has been far from being a roaring success.**



Climate-resilient agriculture

Climate-resilient agriculture (CRA) is an **approach that includes sustainably using existing natural resources through crop and livestock production systems** to achieve long-term higher productivity and farm incomes under climate variabilities.

This practice reduces hunger and poverty in the face of climate change for forthcoming generations.

Improved access and utilization of technology, transparent trade regimes, increased use of resources conservation technologies, an increased adaptation of crops and livestock to climatic stress are the outcomes from climate-resilient practices.

Strategies and technologies for climate change adaptation

Tolerant crops: This provided 20-25 per cent higher yield than the indigenous cultivars.

Tolerant breeds in livestock and poultry:

Indigenous breeds have unique characters that are adapted to very specific eco-systems across the world. These unique characters are resistant to droughts, thermoregulation, ability to walk long distances, fertility and mothering instincts, ability to ingest and digest low-quality feed, and resistance to diseases.

Feed management: Betterment of feeding systems as an adaptation measure can indirectly improve the efficiency of livestock production. Some feeding methods include altering feeding time or frequency and modification of diet composition.

These measures *can decrease the risk from variations of climate by encouraging higher intake or compensating low-feed consumption, decreasing excessive heat load, reducing animal malnutrition and mortality and reducing the feed insecurity during dry seasons respectively*.

Water management: Water-smart technologies like a furrow-irrigated raised bed, micro-irrigation, rainwater harvesting structure, cover-crop method, greenhouse, laser land levelling, reuse wastewater, deficit irrigation and drainage management can support farmers to decrease the effect of variations of climate.

Agro-advisory: Response farming is an integrative approach; it could be called farming with advisories taken from the technocrats depending on local weather information. The success of response farming, viz., decreased danger and enhanced productivity has already been taken in Tamil Nadu and many other states.

Soil organic carbon: Different farm management practices can increase soil carbon stocks and stimulate soil functional stability. Conservation agriculture technologies (reduced tillage, crop rotations, and cover crops), soil conservation practices (contour farming) and nutrient recharge strategies can refill soil organic matter by giving a protective soil cover.

Feeding the soil instead of adding fertilizers to the crop without organic inputs is the key point for the long-term sustainability of Indian agriculture.

39. Member States finalize a new cybercrime convention

News:

PRESS RELEASE

United Nations: Member States finalize a new cybercrime convention

New York, 9 August 2024

The finalization of this Convention is a landmark step as the first multilateral anti-crime treaty in over 20 years and the first UN Convention against Cybercrime at a time when threats in cyberspace are growing rapidly.

New York, 29 July–9 August 2024

Draft United Nations convention against cybercrime

Strengthening international cooperation for combating certain crimes committed by means of information and communications technology systems and for the sharing of evidence in electronic form of serious crimes

The draft convention is expected to be adopted by the General Assembly later this year, thus becoming the first global legally binding instrument on cybercrime.

The purposes of this Convention are to:

(a) Promote and strengthen measures to prevent and combat cybercrime more efficiently and effectively; [*agreed ad referendum*]

(b) Promote, facilitate and strengthen international cooperation in preventing and combating cybercrime; and [*agreed ad referendum*]

(c) Promote, facilitate and support technical assistance and capacity-building to prevent and combat cybercrime, in particular for the benefit of developing countries.

The treaty would enter into force once 40 member nations will ratify it.

Presently, the Budapest Convention (2001) serves as the guideline or reference for cybercrime legislation worldwide.

40. Prime Minister released 109 high yielding, climate resilient and biofortified varieties of crops

News:

PM Modi releases 109 high-yielding, climate-resilient crop varieties

The PM also discussed the importance of millets, and about the benefits of "natural farming and the increasing faith of common people towards organic farming".

The Prime Minister released 109 varieties of 61 crops including 34 field crops and 27 horticultural crops. These varieties, developed by the Indian Council of Agricultural Research.

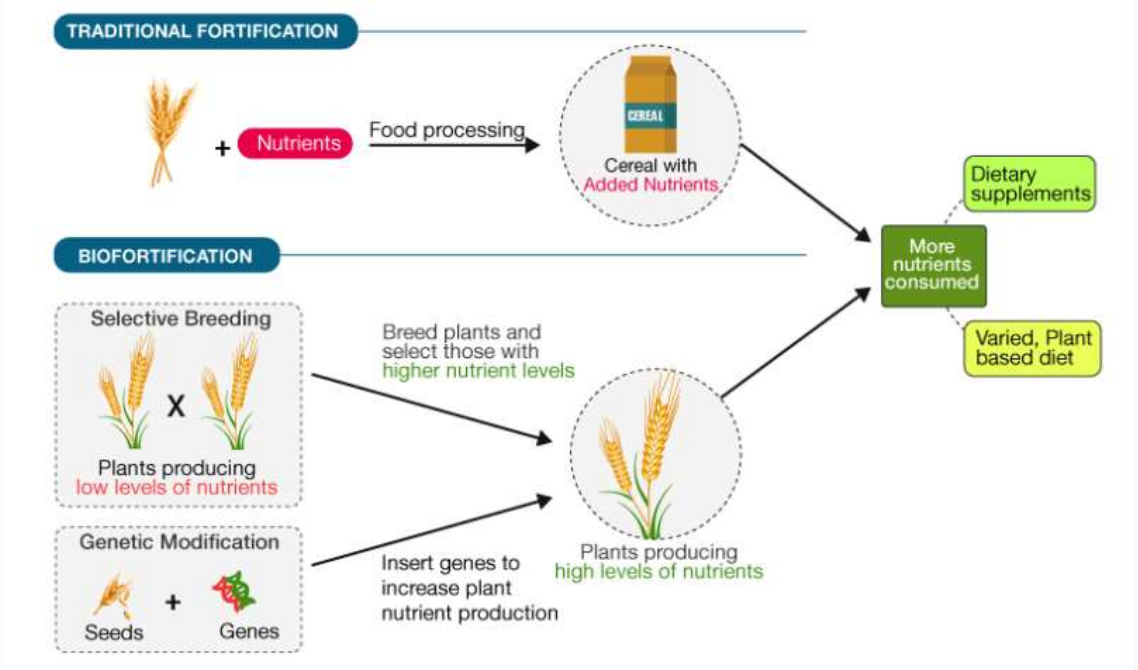
ICAR has been running crop-improvement programme to develop new crop varieties and hybrids with wider adaptability and higher yield.

These crop varieties have been developed for different agro-climatic zones of the country, focusing on short duration, resistance to floods and droughts/heat, and adaptability to various biotic and abiotic conditions.

Interacting with farmers at the farms of ICAR-IARI, Modi said these varieties of different crops will increase yield as well as farmers' income in addition to encouraging them towards environment-friendly sustainable farming practices.

Learn about Biofortification:

Biofortification is the process by which the nutrient density of food crops is increased through conventional plant breeding, and/or improved agronomic practices and/or modern biotechnology without sacrificing any characteristic that is preferred by consumers or most importantly to farmers.



The methodology of Biofortification involves two principal methods: -

Selective breeding – This is the conventional method which requires crops which have naturally occurring high nutritious value -to be crossbred with high-yielding varieties. The development of the hybrid varieties must be monitored by nutritionists to check whether the improved levels of nutrients can be used by the consumers and how these levels are affected by storage, processing, and cooking of the food crop.

Genetic modification – Altering the genetic makeup of a crop by introducing foreign genes from the wild crop of same species or other species that code for the increased production of certain nutrients or disease resistance could make the host crop rich in nutrients and increase its quality. Alternatively, different genes which code for different nutrients can also be stacked in a crop to make it rich in a wide variety of nutrients.

One of the most glorious examples is that of golden rice which has been enriched with beta-carotene, a precursor of Vitamin A.

41. AUKUS Accord

News:

Australia, U.S., U.K. sign nuclear transfer deal for AUKUS submarines

But Australia would be responsible for the storage and disposal of spent nuclear fuel and radioactive waste from the nuclear power units that are transferred under the deal

Published - August 12, 2024 09:21 pm IST - Sydney

In September 2021, leaders of Australia, the United Kingdom, and the United States announced the creation of an enhanced trilateral security partnership called "AUKUS." AUKUS is intended to strengthen the ability of each government to support security and defense interests, building on longstanding and ongoing bilateral ties. It will promote deeper information sharing and technology sharing; and foster deeper integration of security and defense-related science, technology, industrial bases and supply chains.

The initiative is built on two main pillars—

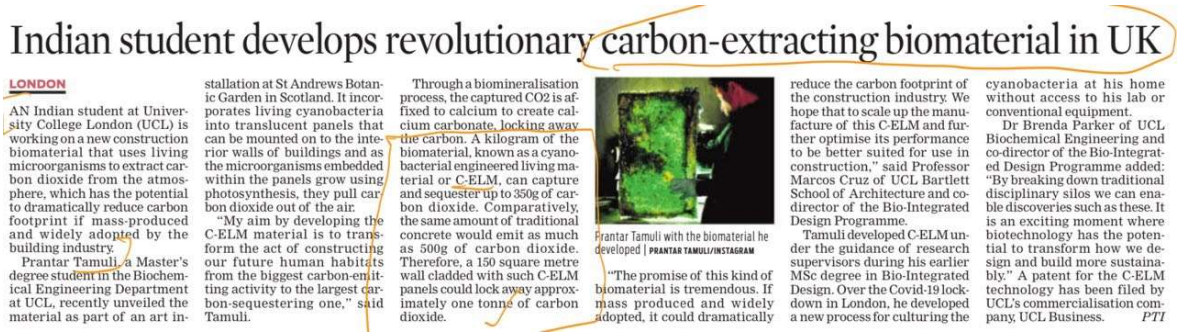
Pillar I: Submarines. The first major initiative of AUKUS was the historic trilateral decision to support Australia in acquiring conventionally-armed, nuclear-powered submarines at the earliest possible date. March 2023, the leaders of the three nations announced an "optimal pathway" to achieving this critical capability while setting the highest non-proliferation standard.

In Pillar II we have advanced capabilities. Recognizing our deep defense ties built over decades, our three nations endeavored to streamline our defense collaboration among our nations while strengthening our ability to protect the sensitive technologies that underpin our security. We committed to trilateral cooperation on emerging tech areas, such as quantum; AI and autonomy; hypersonics and counter-hypersonics; electronic warfare; undersea warfare, and cyber.

It is through both pillars that with transparent collaboration, technological innovation, and interoperability, AUKUS will strengthen integrated deterrence in the Indo-Pacific and our competitive edge there and beyond.

42. Cyanobacterial engineered living material or C-ELM

News:



Indian student develops revolutionary carbon-extracting biomaterial in UK

LONDON

AN Indian student at University College London (UCL) is working on a new construction biomaterial that uses living microorganisms to extract carbon dioxide from the atmosphere, which has the potential to dramatically reduce carbon footprint if mass-produced and widely adopted by the building industry.

Prantar Tamuli, a Master's degree student in the Biochemical Engineering Department at UCL, recently unveiled the material as part of an art installation at St Andrews Botanic Garden in Scotland. It incorporates living cyanobacteria into translucent panels that can be mounted on to the interior walls of buildings and as the microorganisms embedded within the panels grow using photosynthesis, they pull carbon dioxide out of the air.

"My aim by developing the C-ELM material is to transform the act of constructing our future human habitats from the biggest carbon-emitting activity to the largest carbon-sequestering one," said Tamuli.

Through a biomineralisation process, the captured CO2 is affixed to calcium to create calcium carbonate, locking away the carbon. A kilogram of the biomaterial, known as a cyanobacterial engineered living material or C-ELM, can capture and sequester up to 350g of carbon dioxide. Comparatively, the same amount of traditional concrete would emit as much as 500g of carbon dioxide. Therefore, a 150 square metre wall cladded with such C-ELM panels could lock away approximately one tonne of carbon dioxide.

Prantar Tamuli with the biomaterial he developed | PRANTAR TAMULI/INSTAGRAM

"The promise of this kind of biomaterial is tremendous. If mass produced and widely adopted, it could dramatically reduce the carbon footprint of the construction industry. We hope that to scale up the manufacture of this C-ELM and further optimise its performance to be better suited for use in construction," said Professor Marcos Cruz of UCL Bartlett School of Architecture and co-director of the Bio-Integrated Design Programme.

Tamuli developed C-ELM under the guidance of research supervisors during his earlier MSc degree in Bio-Integrated Design. Over the Covid-19 lockdown in London, he developed a new process for culturing the cyanobacteria at his home without access to his lab or conventional equipment.

Dr Brenda Parker of UCL Biochemical Engineering and co-director of the Bio-Integrated Design Programme added: "By breaking down traditional disciplinary silos we can enable discoveries such as these. It is an exciting moment where biotechnology has the potential to transform how we design and build more sustainably." A patent for the C-ELM technology has been filed by UCL's commercialisation company, UCL Business. *PTI*

A new construction biomaterial that uses living microorganisms to extract carbon dioxide from the atmosphere has been developed by **Indian student.**

This could dramatically reduce the construction industry's carbon footprint if mass produced and widely adopted.

A kilogram of this biomaterial, known as a cyanobacterial engineered living material or C-ELM, can capture and sequester up to 350g of carbon dioxide, while the same amount of traditional concrete will emit as much as 500g of carbon dioxide.

A 150 square metre wall cladded with these C-ELM panels will lock away approximately one tonne of carbon dioxide.

43. Long Range Glide Bomb (LRGB), GAURAV

News:

DRDO carries out successful maiden flight test of Long Range Glide Bomb 'GAURAV' from Su-30 MK-I platform off Odisha coast

Posted On: 13 AUG 2024 8:20PM by PIB Delhi

It is an air launched 1,000 kg class glide bomb capable of hitting targets at long distance.

Features:

1. It is an **Air to Surface LRGB** with conventional warheads to destroy enemy air strips, bunkers, hard installations, buildings etc.
2. It is designed to integrate with fighter aircrafts.
3. It consists of an Inertial Navigation based guidance system with Digital Control.
4. GAURAV has been designed and developed indigenously by the Research Centre Imarat (RCI), Hyderabad.

44. How a Brazilian insect helped clean Madhya Pradesh ponds?

News:

How a Brazilian insect helped clean Madhya Pradesh ponds | Cyrtobagous salviniae

An organic solution helps clear reservoirs overtaken by invasive weed 'Chinese jhalar' in Madhya Pradesh

DTE Staff

Published on: 11 Aug 2024, 10:40 am

The last five years have been nothing short of a disaster for these fishermen. The disaster was caused by a highly invasive foreign aquatic weed, known to scientists as *Salvinia molesta* and to local residents as "Chinese Jhalar." The situation in the reservoir has improved compared to what it was before, and the reason behind this change is quite remarkable.

This led to the introduction of the insect, known as *Cyrtobagous salviniae*, proved to be highly effective. The insect eliminated the foreign aquatic weed.

In 2022, when we started this programme, we began in September, and by March 2023, we had introduced the insects into the pond. Every time we visited the area, we released more insects. Now, in all the places where we implemented this programme, such as Gadchiroli, Chandrapur, and others, the lakes have crystal-clear water. In every location where the programme was initiated, we achieved 100% success.

45. First Policy Makers' Forum'

News:

Ministry of Health and Family Welfare

Union Minister of Health & Family Welfare and Chemicals & Fertilizers Shri JP Nadda inaugurates 'First Policy Makers' Forum' in New Delhi

Just learn, why this forum?

To elevate India's position in the global pharmaceutical sector, **the Indian Pharmacopoeia Commission (IPC), in collaboration with the Ministry of Health & Family Welfare and the Ministry of External Affairs**, hosted an international delegation of policymakers and drug regulators from 15 countries.

The forum featured the launch of innovative digital platforms for pharmacopoeia and drug safety monitoring.

Who all participated?

The forum witnessed participation from various countries including ***Burkina Faso, Equatorial Guinea, Ghana, Guyana, Jamaica, Lao PDR, Lebanon, Malawi, Mozambique, Nauru, Nicaragua, Sri Lanka, Syria, Uganda and Zambia.***

The forum aims to **foster meaningful discussions on the recognition of the IP and the implementation of India's flagship Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP**), popularly known as the Janaushadhi Scheme.

Two major initiatives of this forum:

A key highlight of the event was the launch of two significant digital platforms by the Hon'ble Minister of Health and Family Welfare and Chemicals & Fertilizers —

The IP Online Portal:

The IP Online Portal represents a major step towards digitalizing the Indian Pharmacopoeia, making drug standards more accessible to stakeholders worldwide. This initiative aligns with the Government of India's commitment to promoting environmentally friendly solutions under the 'Digital India' campaign.

Adverse Drug Reaction Monitoring System (ADRMS) software:

The ADRMS software is India's first indigenous medical product safety database tailored to the needs of the Indian population. It facilitates the collection and analysis of adverse events related to medicines and medical devices, thereby significantly strengthening the country's pharmacovigilance infrastructure.

46. National Geoscience Awards-2023

News:


Ministry of Mines

President of India to Confer National Geoscience Awards-2023 Tomorrow

Posted On: 19 AUG 2024 5:05PM by PIB Delhi

The National Geoscience Award (NGA) is one of the oldest and most prestigious national awards in the field of geosciences, instituted by the Ministry of Mines, Govt. of India in the year 1966. **Before the year 2009, these awards were called as National Mineral Awards.**

The objective of these Awards is *to honour individuals and teams for extraordinary achievements and outstanding contributions in various fields of geosciences* i.e. mineral discovery & exploration, Mining Technology & Mineral Beneficiation, fundamental/ applied geosciences.

Any citizen of India with significant contribution in any field of geosciences is eligible for the award. The Ministry of Mines confers National Geoscience Awards every year in three categories:

i. National Geoscience Award for Lifetime Achievement
ii. National Geoscience Award
iii. National Young Geoscientist Award

If we take latest example:

For NGA 2023, 240 nominations were received under different award categories and examined through a three-stage screening process.

After detailed deliberations, 01 award for **National Geoscience Award for Lifetime Achievement** and 01 award for **the National Young Geoscientist Award**. These **12 National Geoscience Awards** will be presented to 21 Geoscientists by the President of India in the august presence of distinguished geoscientists, scholars, policymakers and industry leaders.

47. India Australia Rapid Innovation and Start-up Expansion (RISE) Accelerator

News:

NITI Aayog

India Australia RISE Accelerator calls for Start-ups and MSMEs in Climate Smart Agritech

Posted On: 19 AUG 2024 10:07AM by PIB Delhi

The **India Australia Rapid Innovation and Start-up Expansion (RISE) Accelerator**, is a purpose-built program to support and accelerate Indian and Australian start-ups.

RISE Accelerator targets to enable start-ups with mature tech-based innovations to fast-track their cross-border social, economic and environmental impact through cross-border innovation ecosystem.

RISE Accelerator is operationalized through a powerful partnership between:

- Atal Innovation Mission (AIM), NITI Aayog, the Government of India's flagship initiative to promote a culture of innovation and entrepreneurship in the country
- CSIRO, Australia's national science agency

Vision

To provide mission-critical support to start-ups solving Australia & India's most important shared national challenges, creating sustainable impact through technology-led innovation, cross-border collaboration and ecosystem integration

Focus Themes:

With a focus on Environment and Climate Technology, the program will be tailored to accelerate start-ups working on a range of areas:

48. India-Malaysia Trade

On 20 August 2024, the Prime Minister of Malaysia, Dato' Seri Anwar Ibrahim visited India.

Key highlights of the meeting:

a. Both Prime Ministers **recognized that the Enhanced Strategic Partnership between India and Malaysia established in 2015** has helped in advancing bilateral ties into a multidimensional one.
b. Malaysia appreciated India's initiative in hosting the Voice of the **Global South Summit (VOGSS),** providing a platform by which countries of the Global South could deliberate and address their concerns, interests and priorities as well as exchange ideas and solutions.
c. India appreciated Malaysia's participation in all three editions of the VOGSS.
d. Both Prime Ministers held discussions on the entire range of bilateral cooperation including political, defence and security cooperation, economic and trade, digital technologies, start-ups, fintech, energy.
e. Both sides agreed to support and expedite the review process of ASEAN- India Trade in Goods Agreement (AITIGA) to make it more effective, user-friendly, simple, and trade-facilitative for businesses.

If we see trade:

India has a trade deficit with Malaysia, with India importing more than it exports.

Country / Region: MALAYSIA

S.No.	\Year	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024
1.	**EXPORT**	4,510,641.90	4,497,079.07	5,212,357.37	5,726,516.72	6,016,559.47
2.	%Growth		-0.30	15.91	9.86	5.06
3.	India's Total Export	221,985,418.10	215,904,322.13	314,702,149.28	362,154,987.57	361,895,227.05
4.	%Growth		-2.74	45.76	15.08	-0.07
5.	%Share	2.03	2.08	1.66	1.58	1.66
6.	**IMPORT**	6,916,662.95	6,179,121.70	9,263,064.76	10,218,523.43	10,557,232.39
7.	%Growth		-10.66	49.91	10.31	3.31
8.	India's Total Import	336,095,445.61	291,595,770.04	457,277,458.91	574,980,127.11	561,604,236.63
9.	%Growth		-13.24	56.82	25.74	-2.33
10.	%Share	2.06	2.12	2.03	1.78	1.88
11.	**TOTAL TRADE**	11,427,304.84	10,676,200.77	14,475,422.13	15,945,040.14	16,573,791.85
12.	%Growth		-6.57	35.59	10.15	3.94
13.	India's Total Trade	558,080,863.71	507,500,092.17	771,979,608.19	937,135,114.68	923,499,463.68
14.	%Growth		-9.06	52.11	21.39	-1.46
15.	%Share	2.05	2.10	1.88	1.70	1.79
16.	**TRADE BALANCE**	-2,406,021.05	-1,682,042.63	-4,050,707.39	-4,492,006.71	-4,540,672.92
17.	India's Trade Balance	-114,110,027.52	-75,691,447.91	-142,575,309.63	-212,825,139.54	-199,709,009.58

Major imported items by India from Malaysia:

Major items imported by India from Malaysia include **vegetable oils** (US$ 1.64 billion) followed by electrical machinery and equipment and parts thereof (US$ 1.07 billion), petroleum products (US$ 1.01 billion), nuclear reactors, boilers, machinery, and mechanical appliances; parts thereof (US$ 659 million) and organic chemicals (US$ 341 million) from April-November 2023.

Major exported items from India to Malaysia

Major exported items from India to Malaysia include engineering goods (US$ 1.23 billion), petroleum products (US$ 1.03 billion), organic and inorganic chemicals (US$ 371 million), meat, dairy and poultry products (US$ 336 million) and others (US$ 246 million), etc. during April-November 2023.

49. Living Animal Species (Reporting and Registration) Rules, 2024.

News:

The ministry had notified the Living Animal Species (Reporting and Registration) Rules, 2024 vide Gazette Notification dated 28th February 2024

Posted On: 20 AUG 2024 9:16PM by PIB Delhi

Many living specimens of exotic animal species listed in Wild Life (Protection) Act, 1972 are in possession of various individuals, organizations, and zoos.

These **living specimens of exotic animals listed under Schedule IV of the Act** are to be reported and registered by the concerned individuals, organizations, and zoos.

The registration of these exotic animal species is to be done in the PARIVESH 2.0 portal.

The Ministry of Environment, Forest and Climate Change, Government of India notified the Living Animal Species (Reporting and Registration) Rules, 2024 under **Section 49 M (WPA, 1972) vide Gazette Notification dated 28th February 2024.**

49M. Possession, transfer and breeding of living scheduled animal species. — (*1*) Every person possessing a living specimen of an animal species listed in Schedule IV shall report the details of such specimen or specimens in his possession to the Management Authority or the authorised officer:

As per these rules, every person who is in possession of any living specimen of species listed in Schedule IV of the Wild Life (Protection) Act 1972, **is required to report the details of such animals to the Chief Wild Life Warden of the concerned State, within a period of six months from the issue of gazette notification** and or within thirty days of possession of such animal species.

The six-month period would expire on 28th August 2024**.**

50. Chitin can improve fungal infection treatment

News:

Ministry of Science & Technology

Drug delivery method can improve fungal infection treatment

Posted On: 20 AUG 2024 1:09PM by PIB Delhi

Azole drugs used currently attack the fungal membrane and neutralize the fungi.

However, resistance to the existing antifungal drugs is a matter of concern and hence need better methods of drug delivery, so that the medicines for treatment of the infection can be effective.

A team of scientists from Agharkar Research Institute, an autonomous institute of the Department of Science & Technology (DST) have **used a chitin synthesis fungicide, Nikkomycin, produced by the bacterial Streptomyces spp. to develop Nikkomycin loaded polymeric nanoparticles**.

Chitin is the chief component of fungal cell walls and is absent in the human body. The drug loaded nanoparticles were found to disrupt the growth of Aspergillus and found effective against fungal infection known as Aspergillosis caused by fungi Aspergillus flavus and Aspergillus fumigatus.

The nano-formulation developed was found to be free of cytotoxic and hemolytic effects.

51. Portal for Online Monitoring of Projects – Thermal (PROMPT)

News:

Ministry of Power

Union Minister Shri Manohar Lal Khattar Launches Portal for Online Monitoring Of Projects – Thermal (PROMPT)

Introduction:

The electricity is the key driver for the ongoing economic activities in the country. Accordingly, the demand for power is also increasing therefore completion of ongoing schemes and thermal projects in timebound manner is extremely critical.

The **launch of the portal PROMPT** will enable transparent, coordinated, and effective working of the power sector in the country.

The newly launched PROMPT portal is designed to **facilitate real-time tracking and analysis of thermal power projects.**

Key Features and Advantages of PROMPT:

Real-Time Tracking and Analysis: The portal provides a centralized platform for monitoring all aspects of project execution, enabling swift identification and resolution of potential issues.

Transparency and Accountability: By digitizing the monitoring process, the portal ensures greater transparency in project management, leading to timely resolution of issues, reduction in time and cost overruns, and enhanced project execution efficiency.

Resource Optimization: The portal supports predictable resource availability, aiding in meeting the country's electricity demand at a reasonable price, ultimately benefiting consumers.

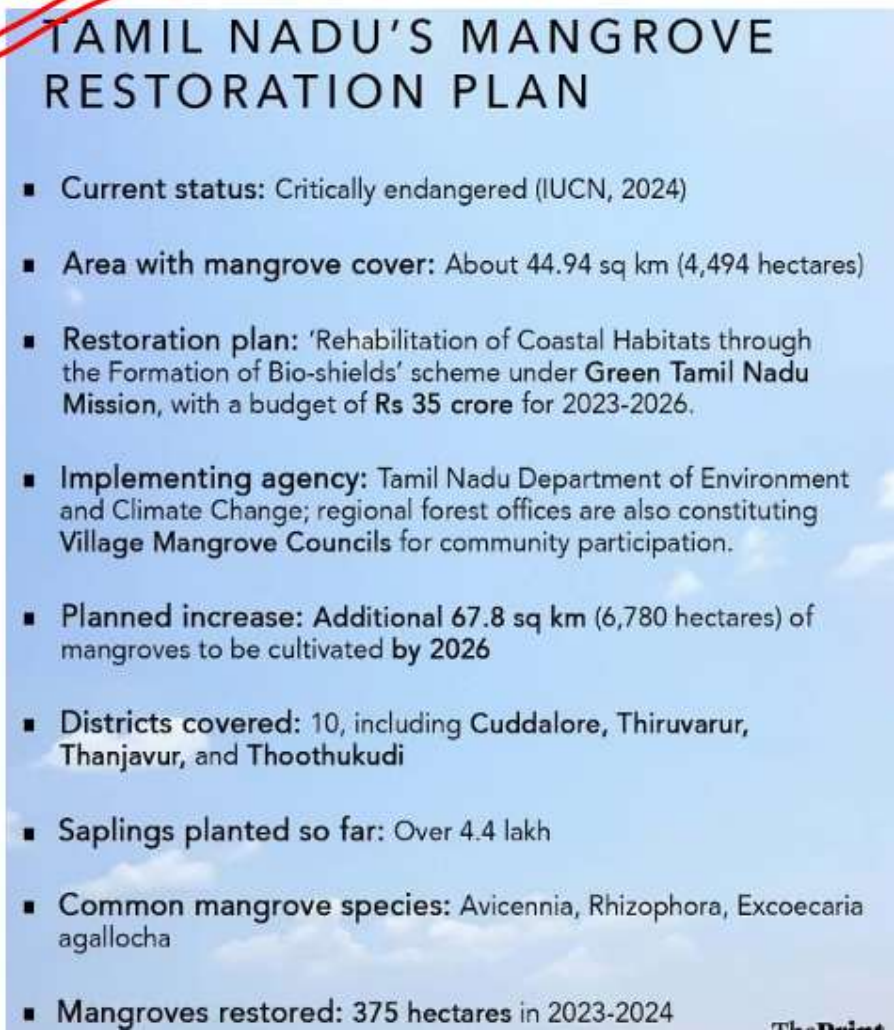
52. Tamil Nadu is on a mangrove mission to create 'bio-shields

News:

Tamil Nadu is on a mangrove mission to create 'bio-shields'. Villagers are on the frontlines

The Tamil Nadu government is nursing old mangroves back to health and planting new ones across coastal districts like Cuddalore. Local residents are playing a symbiotic role in the plan.

As part of the Green Tamil Nadu Mission, **the state government is establishing 'bio-shields'** across 10 coastal districts, including Cuddalore. The Department of Environment and Climate Change has allocated Rs 35 crore to implement the 'Rehabilitation of Coastal Habitats through the Formation of Bio-shields' scheme, launched last year.

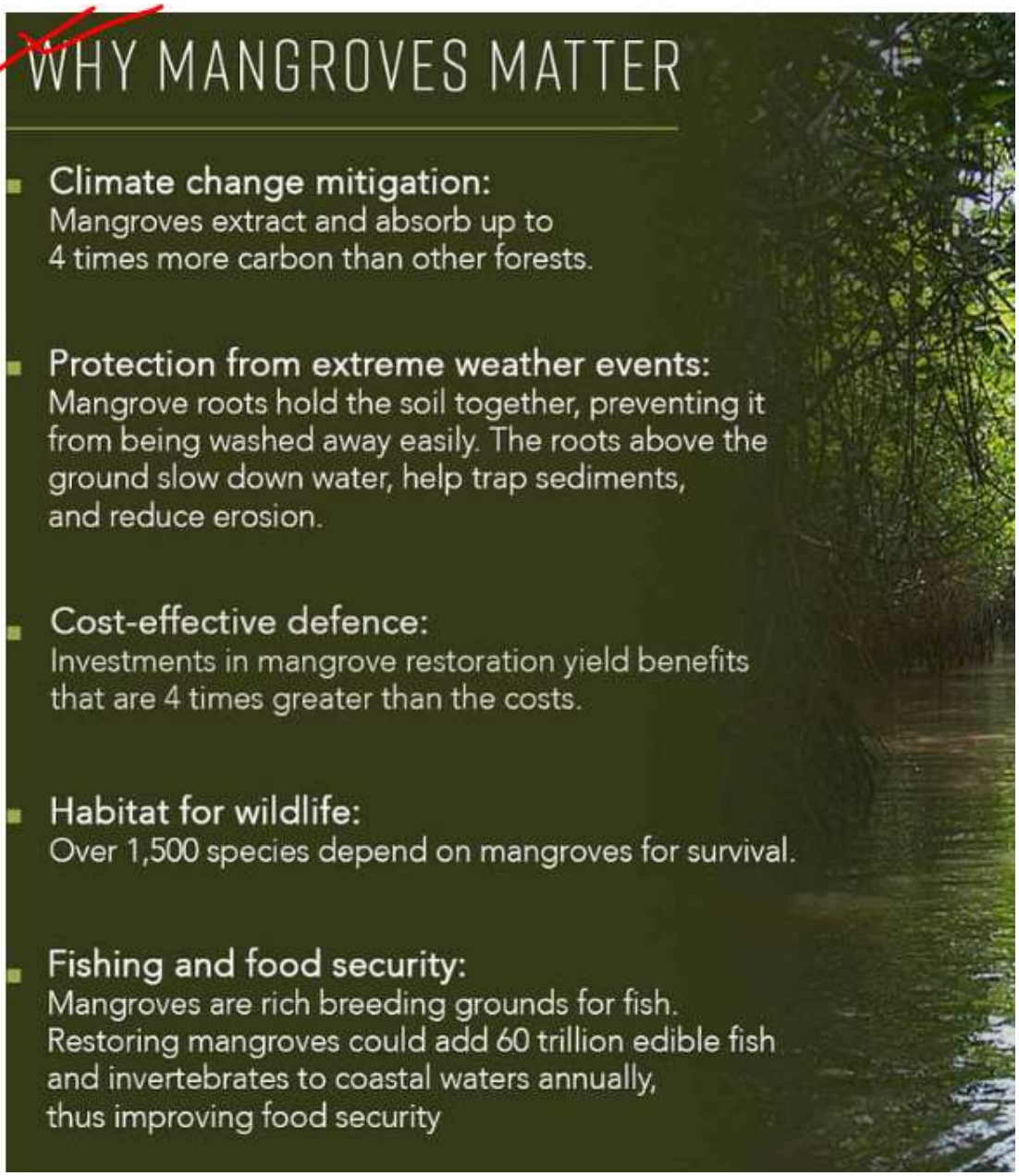


The goal is ambitious:

a. To expand Tamil Nadu's mangrove cover by adding 67.8 square kilometres to the existing 44.94 square kilometres by 2026.
b. This target has become even more urgent after the devastating floods last December in the coastal districts of Thoothukudi, Tirunelveli, Tenkasi, and Kanniyakumari, coupled with
c. the International Union for Conservation of Nature (IUCN) designating the state's mangroves as 'critically endangered' this May.

Mangroves, which cover about 30 per cent of India's coastline, are the first line of defence against cyclones, floods, and coastal erosion. But over the last century, India has lost 40 percent of its mangrove cover, now at around 4,975 square kilometres, **according to the 2021 Forest Survey Report.**

Both the Centre and several state governments have stepped up their efforts to revive mangroves. In 2022, India joined the Mangrove Alliance for Climate at COP27, and last year, the Union Budget allocated over Rs 3,000 crore for the 'Mangrove Initiative for Shoreline Habitats & Tangible Incomes (MISHTI)' scheme.



53. India entered Security of Supply Arrangement (SOSA)

News:

DOD, India Ministry of Defence Enter Into Security of Supply Arrangement

Home | News & Events | DOD, India Ministry of Defence Enter Into Security of Supply Arrangement

On August 22, 2024, the **Department of Defense (DoD), US** and the Ministry of Defence of the Government of India (IN MoD) entered into a bilateral, non-binding Security of Supply Arrangement (SOSA).

Through this SOSA, the United States and India agree to provide reciprocal priority support for goods and services that promote national defense.

The Arrangement will enable both countries to acquire the industrial resources they need from one another to resolve unanticipated supply chain disruptions to meet national security needs.

With an expanding global supply chain for DOD, SOSAs are an important mechanism for DoD to strengthen interoperability with U.S. defense trade partners.

India is the eighteenth SOSA partner of the U.S.

Other SOSA partners include Australia, Canada, Denmark, Estonia, Finland, Israel, Italy, Japan, Latvia, Lithuania, the Netherlands, Norway, Republic of Korea, Singapore, Spain, Sweden, and the United Kingdom.

54. BioE3 (Biotechnology for Economy, Environment and Employment) Policy for Fostering High Performance Biomanufacturing

News:

Cabinet approves BioE3 (Biotechnology for Economy, Environment and Employment) Policy for Fostering High Performance Biomanufacturing

Posted On: 24 AUG 2024 7:23PM by PIB Delhi

The Union Cabinet, chaired recently approved 'BioE3 (Biotechnology for Economy, Environment and Employment) Policy for Fostering High Performance Biomanufacturing' of the Department of Biotechnology.

The salient features of BioE3 policy include:

a. innovation-driven support to R&D and entrepreneurship across thematic sectors.
b. This will accelerate technology development and commercialization by establishing Biomanufacturing & Bio-AI hubs and Bio foundry (*Bio foundry is a place where biomanufacturing meets automation*.)
c. Along with prioritizing regenerative bioeconomy models of green growth, this policy will facilitate expansion of India's skilled workforce and provide a surge in job creation.
d. **Overall, this Policy will further strengthen Government's initiatives such as 'Net Zero' carbon economy & 'Lifestyle for Environment'** and
e. will steer India on the path of accelerated 'Green Growth' by promoting 'Circular Bioeconomy'.

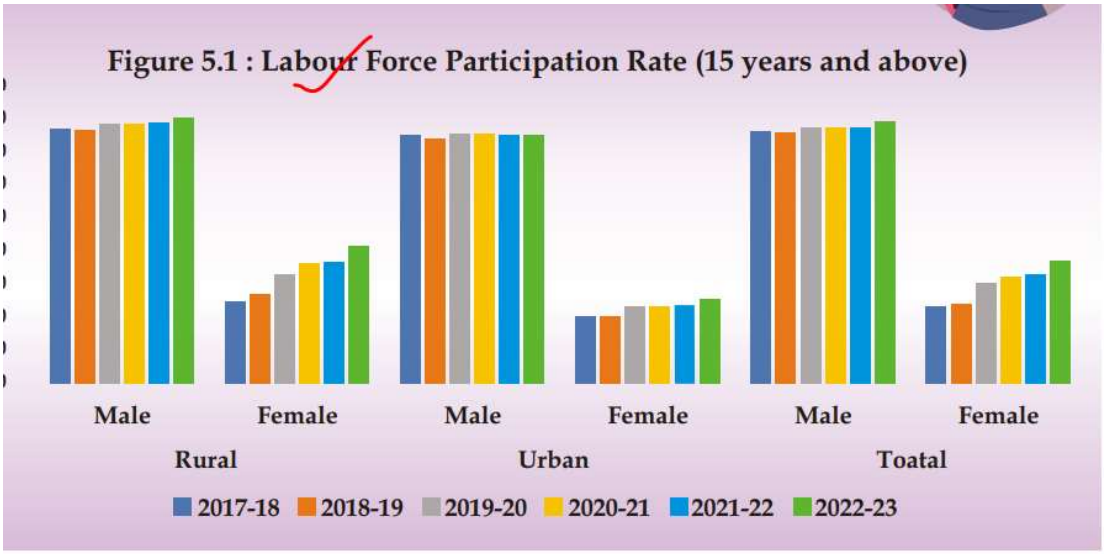
To address the national priorities, the BioE3 Policy would broadly focus on the following strategic/thematic sectors:

1. high-value bio-based chemicals;
2. biopolymers and enzymes;
3. smart proteins and functional foods;
4. precision biotherapeutics;

5. climate resilient agriculture; carbon capture and its utilization;
6. marine and space research.

55. Women and Men in India, 2023: Participation in economy (part 3)

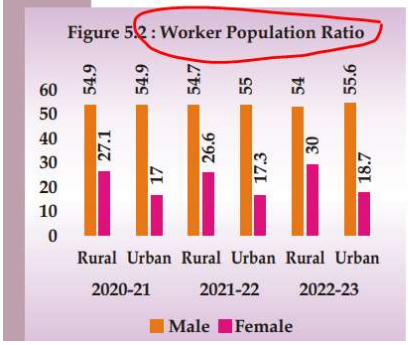
Part 1 and 2 (Education and health) already covered.



: *Periodic Labour Force Survey (PLFS), National Statistical Office, MoSPI*

Labour Force Participation Rate (LFPR) is defined as the percentage of persons in the labour force in the population.

$$LFPR = \frac{\text{No. of Employed Persons + No. of Unemployed Persons}}{\text{Total Population}} * 100$$



5.2.3 The Worker Population Ratio (WPR) serves as a crucial indicator for evaluating a country's employment landscape, offering insights into the proportion of the population actively engaged in the production of goods and services. In the fiscal year 2022-23, the WPR for the male population was 54 in rural areas and 55.6 in urban areas, while for the female population, it was significantly lower at 30 in rural and 18.7 in urban areas. The disparity between men and women remains pronounced, as indicated by the notable differences in the WPRs **(Table 4.4)**.

5.2.4 For the population aged 15 years and above, the WPR for males was 78.0 in rural areas and 71.0 in urban areas. In stark contrast, the corresponding figures for females were 40.7 in rural areas and 23.5 in urban areas **(Table 4.5)**. The data vividly illustrate that women's employment situation is markedly inferior to that of men, with the WPR for females being less than half of that for males

Statement 5.2 : Percentage distribution of workers in usual status (ps+ss) by broad industry division

2022-23

Broad Industry Division	Rural		Urban	
	Male	Female	Male	Female
Agriculture	49.1	76.2	4.7	11.7
Mining & Quarrying	0.4	0.1	0.6	0.1
Manufacturing	8.2	8.3	20.5	23.9
Electricity, Water, etc.	0.5	0.1	1.3	0.5
Construction	19.0	4.2	12.6	3.1
Trade, Hotel & restaurants	10.5	4.1	26.5	15.2
Transport, Storage & Communications	5.3	0.2	13.2	5.5
Other Services	7.0	6.9	20.6	40.1

Source: Periodic Labour Force Survey (PLFS), July 2022- June 2023, National Statistical Office, Ministry of Statistics and Programme Implementation

Unemployment Rate (UR) is defined as the percentage of persons unemployed among the persons in the labour force.

$$UR = \frac{\text{No. of Unemployed Persons}}{\text{No. of Employed Persons + No. of Unemployed Persons}} * 100$$

women in urban area. It needs to be highlighted that unemployment rate is the maximum for urban females in the 15-29 years' age group followed by urban males in that age group **(Table 4.14)**. When we look in to the state wise unemployment rate for the year 2022-23 **(Table 4.15)**, in Rural India, Unemployment Rate is the lowest in Madhya Pradesh (0.8) followed by Jharkhand (0.9), Tripura (1.1) and Mizoram (1.2). In Urban India, the lowest Unemployment Rate can be seen in Dadra & Nagar Haveli and Daman & Diu (1.4) followed by Delhi (1.7) and Gujarat (2.2). In all the States in urban areas, unemployment rate of female is more than that of male except Chandigarh and Manipur.

56. How the Banni grasslands of Kachchh, Gujarat can be restored? Study.

News:

How the Banni grasslands of Kachchh, Gujarat can be restored

PREMIUM

The Kachchh district in Gujarat houses one of the largest tracts of grasslands in the country. In a new study, researchers have assessed the suitability of different areas of Banni for sustainable grassland restoration, considering ecological value to be the primary criterion

Published - August 20, 2024 08:30 am IST

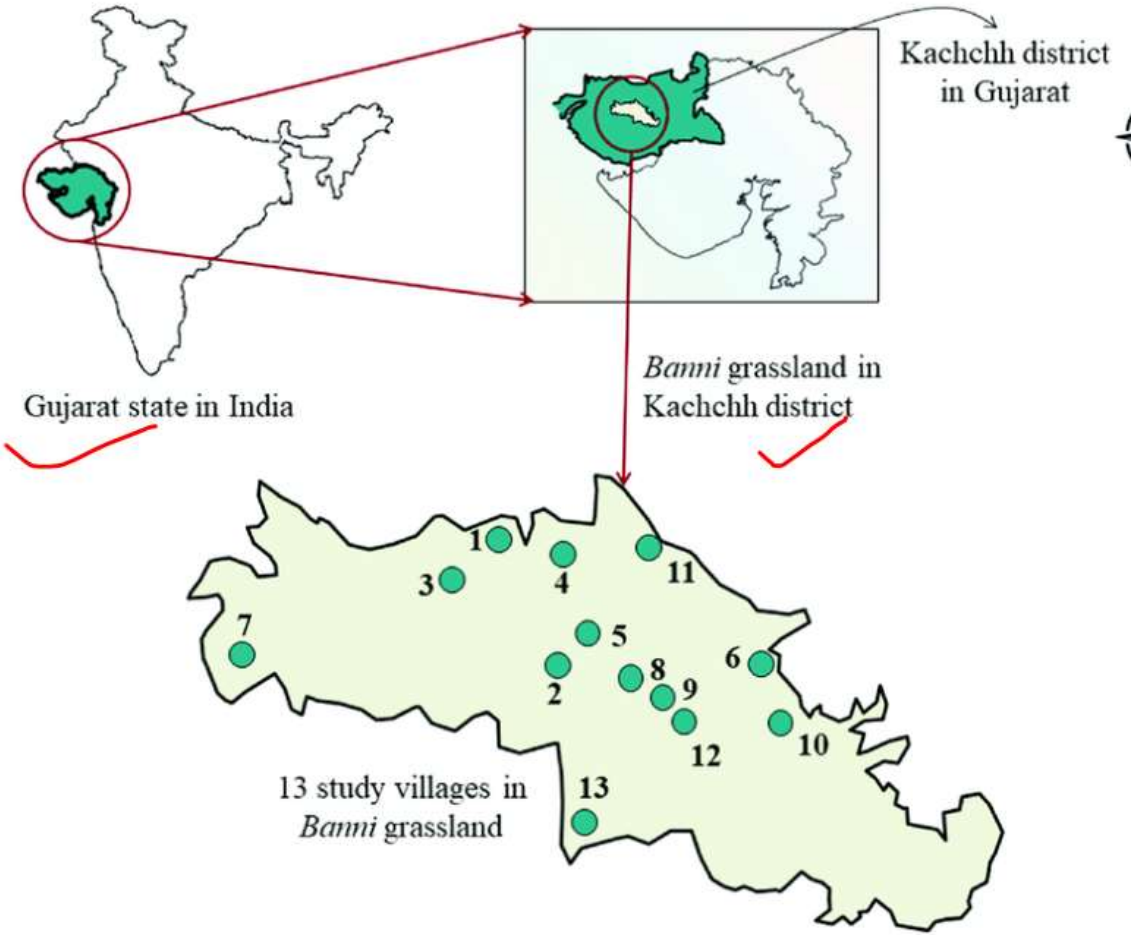
Study analyzed multiple characteristics of soil (nutrients & micronutrients) while using satellite data for grassland restoration considering ecological value to be primary criterion.

In India, grasslands account for approximately eight lakh sq. km, or about 24% of the country's total land area (32.8 lakh sq. km). They are increasingly threatened by agricultural conversion, tree-based plantation projects, invasive species, and mega-development projects. The issue is exacerbated by the strong bias of government and non-profit organisations for the conservation and protection of forests.

The Kachchh district in Gujarat, in the western part of the country, houses one of the largest tracts of grasslands in the country. Popularly known as 'Banni', it once covered an area of approximately 3,800 sq. km but it has now decreased to about 2,600 sq. km. In a new study, researchers at the Department of Earth and Environmental Science in Krantiguru Shyamji Krishna Verma (KSKV) Kachchh University, in Bhuj, have assessed the suitability of different areas of Banni for sustainable grassland restoration, considering ecological value to be the primary criterion.

Findings of study:

1. Study categorized Banni grassland's restoration zones into five categories.
2. 36% of existing grassland area was “highly suitable”, 28 %was “suitable”, 27% was “moderately suitable”, 7% was “marginally suitable” while 2% was “not suitable” for restoration.
3. First two categories (Highly suitable and Suitable zones) can be restored easily with adequate water sources (Irrigation or rainwater harvesting).
4. “Marginally suitable” and “not suitable” zones can be managed through terracing & fertilization while protecting them from water erosion and salt intrusion.



The **Banni grasslands are inhibited by more than 20 ethnic, semi-nomadic communities** across 48 hamlets in 19 "panchayats" (a village level administrative control unit in India) with a population of about 21,338 in 2011-12. **Maldhari is the dominant community in the area**, raising livestock for their livelihood and having a particular preference for Banni breed.

The **Banni area in Kutch region of western India is a typical salt desert area**. The usual methods of farming and husbandry are not successful here.

Prosopis juliflora — a non-native and invasive tree species — has encroached over half Banni, one of Asia’s largest grasslands in Gujarat. The tree is harmful to ecology; yet, local communities have over time grown dependent on it for livelihood by, for example, making charcoal.

57. 'Mercury Bomb' in Arctic

News:

A vast reservoir of mercury, trapped in permafrost for thousands of years, is being released as the ice thaws due to increasing global temperatures, a recent study warns.

How it is happening? Global Warming is the reason.

The Arctic, a focal point of climate crisis concerns, **is warming four times faster than the global average**. As temperatures rise, permafrost, **frozen ground that covers much of the Arctic, is melting at unprecedented rates.**

Permafrost acts like a natural freezer, preserving not just organic material but also dangerous substances like mercury. **The permafrost in the Arctic has accumulated the metal over thousands of years, absorbed by plants that die, decompose and become part of the frozen ground.**

As this permafrost thaws, **mercury is released into the environment.**

The **Yukon River, which flows through Alaska towards the Bering Sea**, plays a crucial role in this process. It erodes the permafrost along its banks, carrying sediment laden with mercury downstream. This sediment, containing potentially dangerous levels of the toxic metal, is then deposited along the river's path.

How much mercury is there?

"Mercury doesn't just accumulate by chance," he explained. "The planet's natural atmospheric circulation tends to move pollutants toward high latitudes, resulting in mercury build-up in the Arctic. Because of its unique chemical behavior, a lot of mercury pollution ends up here, where it has been trapped in the permafrost for millennia."

This poses a significant risk to the five million people living in the Arctic zone, particularly the three million who live in areas where permafrost is expected to disappear entirely by 2050.

As mercury is released into the environment, it enters the food chain, where it accumulates in fish and game, staples of the traditional Arctic diet.

Why is mercury dangerous?

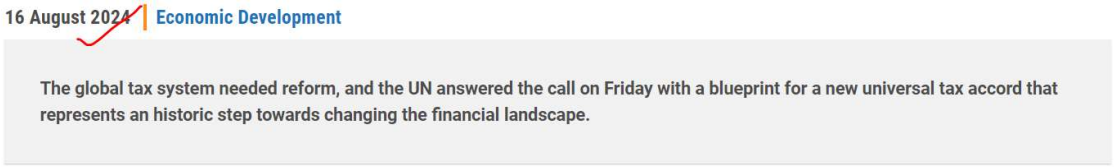
Mercury is a tricky element. **It moves from the atmosphere to the ground, then to the water and back into the atmosphere**. Because of the way the Earth's natural atmospheric circulation works, pollutants like mercury tend to accumulate in the Arctic.

Once there, it becomes part of the ecosystem, cycling through plants, animals and soil.

The study found that finer-grained sediments in the Yukon contain more mercury than coarser grains. This suggests that certain types of soil may pose a greater risk, as they hold more mercury and are more easily eroded by the river.

58. Terms of Reference adopted for a UN Framework Convention on International Tax Cooperation

News:


16 August 2024 | Economic Development

The global tax system needed reform, and the UN answered the call on Friday with a blueprint for a new universal tax accord that represents an historic step towards changing the financial landscape.

UN's Ad Hoc Committee to Draft Terms of Reference for a United Nations Framework Convention on International Tax Cooperation approved a package of guidance for UN Global Tax Convention.

It aims at establishing a UN Global Tax Treaty for legitimate, fair, stable, inclusive and effective international tax system.

Is there consensus on a global tax treaty?

No. Developing countries largely support it, but some industrialised nations have expressed reservations, as reflected in the vote held in the Ad Hoc Committee on Friday.

A total of 110 Member States voted in favour of the terms of reference for a new treaty, with 44 abstentions and eight nations voting against it (Australia, Canada, Israel, Japan, New Zealand, Republic of Korea, United Kingdom and the United States).

What are the next steps?

1. The **Ad Hoc Committee's terms of reference will be sent to the General Assembly**, which will hold a vote during the world body's 79th session that begins in September.
2. **If adopted, the Assembly would have the convention and two protocols drafted by a Member State-led negotiating committee, which would meet annually for the next three years**.
3. The negotiating committee would then submit a final text to the General Assembly for its consideration in the first quarter of the 82nd session, according to the terms of reference.
4. **That would mean that all 193 UN Member States could vote on a finalised UN global tax treaty in 2027.**
5. The UN treaty would need to be adopted by the General Assembly, **after which it would be opened for signature and ratification to all Member States.**

59. Shree Narayan Guru was remembered on his 170th Birth Anniversary

News:

Pinarayi flays bid to appropriate Narayana Guru and portray the social reformer as a Hindu sage

Updated - August 20, 2024 11:46 pm IST Published - August 20, 2024 09:55 pm IST - THIRUVANANTHAPURAM

Sree Narayana Guru was one of the key figures that developed the ideological premise for the renaissance in Kerala. His role in transforming feudal and caste oriented society of Kerala into a modern community is multi-fold and is hailed as the sculptor of modern Kerala.

Baskaran opines, "Guru's ideology is based on non-violence, generosity and human fraternity. Guru found the concept of conscious human equality from Advaita. The fundamental elements of Guru's teaching include truth, equality, fraternity and freedom"

The lower or backward castes like the Ezhava caste had not the right to worship gods like Lord Siva at the time. Instead, they were forced to worship the local gods such as māṭan-maṟuta cāttan- and provide them offering such as liquor or blood of sacrificed animals or meat. Guru started his social activism at a time when the lower castes had not the right to enter the Hindu temple for prayer. M K Sanu says,

> "Narayana Guru appeared into the midst of a caste order regulated by Brahmanic hegemony with his Aruvippuram consecration. It is impossible to describe the depth of revolutionary and reformative consciousness Guru employed at installing a rock piece and consecrated Sivalinga during a time when it was believed to be the divine right of the Brahmin caste alone to consecrate and install idols at temples" (Sree Narayana Guru Swami 8).

The consecration of the idol of Siva on a Sivaratri in 1888 was a process in which the right or power over the Gods enjoyed only by one caste of people was opened up for the Ezhava community who were considered untouchable and Avarna by the Upper caste Brahmins. This act had reflected a far wider impact than the need for a temple for the Avarnas. The verse he installed in front of the consecrated Siva idol proves this. Guru wrote,

"Jātibhedaṃ matadveṣaṃ
Yetumillāte sarvvaruṃ
Sodaratvena vāḻunna
Mātṛkā sthānamāṇit"

which is translated as 'this is a model place of brotherhood where everyone, without a difference in caste and in religious customs, may come together'. T Baskaran writes "this

The concept of administration of temples Narayana Guru had envisioned was unique. The upper caste Hindu temples at the time were spaces for chants, worship, and prayers, where food and generous gifts were given to Brahmins, and conducted major festivals in luxury and with savage worship customs. On the other hand, Guru had insisted on the following regulations at the temples he had consecrated.

- Temples should have a library.
- Temples should have schools. All religious texts shall be taught.
- There shall be centres to vocationally train the students.
- There shall be parks for people to sit and spend time.
- The amount the temple gets from people in the form of the offering shall be utilized for the benefit of poor people.
- No money shall be spent on Elephant, fireworks, and festivals at the temples.

Guru said that the temples need not be built in the traditional style rather what was needed was spacious room for everyone to come and sit, even mentioned that it would be beneficial to build temples in the style of Christian churches as it would aid well in conducting prayers, and while delivering speech (Sree Narayana Guru Vaikhari 92). Guru had said that temples were built as per the request of those who were fond of worship at the temple, and if the Christians or Muslims ask, Guru had said, worship spaces for them would also be constructed (Sree Narayana Guru Vaikhari 116). It was Guru's suggestion to conduct

Guru was against many of the superstitious customs and beliefs that were practiced among the Ezhava community at the time. 'Kettu Kalyanam', 'Thirandu Kalyanam', polygamy, polyandry, consumption of alcohol, animal sacrifice, and other such age-old practices were questioned, and Guru made moral and logical attempts at bringing an end to such practices. He brought a stop to the meaningless practice of Kettukalyanam or the practice of fixing marriage at the childhood of a boy and a girl. He destroyed the savage worship places of the lower castes where animal sacrifices and liquor were offered as offerings to the gods and prohibited any such worship. He made an end to polygamy by introducing a new tradition in marriage among his community in 1916. Guru had strictly prohibited the production and consumption of any form of liquor in any manner. The

1.3 Sree Narayana Dharma Paripalana Yogam and Dharma Sangham

Sree Narayana Dharma Paripalana Yogam was started in 1903 as per the Company Act, with Guru as its president. This organization became a major channel of force in the renaissance in Kerala. Freedom to worship, reformation of customs, formation of modern family, promotion of education, protests for human rights including the right to walk free on public roads, agitations to provide Avarnas with opportunities at government jobs,

60. NDMA to monitor 189 high-risk glacial lakes

News:

NDMA to monitor 189 high-risk glacial lakes to prevent disasters

The National Glacial Lake Outburst Floods Risk Mitigation Programme was approved by the Centre on July 25; some of the proposed steps include attempting 'lake-lowering measures' and mitigating damage in downstream States

Updated - August 23, 2024 02:54 am IST Published - August 22, 2024 09:55 pm IST - NEW DELHI

Considering the risk of these glacial lakes, **it was suggested by the NDMA that there is an immediate need to take up measures to mitigate GLOF through installation of early warning systems**, automatic weather stations, and other mitigation activities.

As many as 27 glacial lakes have been identified as high-risk in Arunachal Pradesh across five districts -- Tawang (6), Kurung Kumey (1), Shi Yomi(1), Dibang Valley (16) and Anjaw (3).

The Centre for Development of Advanced Computing (C-DAC) is the lead technical agency appointed by the NDMA for the purpose.

Central programme:
The National Glacial Lake Outburst Floods Risk Mitigation Programme (NGRMP) was approved by the Centre on July 25.

The programme aims at detailed technical hazard assessments, installing automated weather and water level monitoring stations (AWWS) and early warning systems (EWS) at the lakes and in downstream areas. So far, 15 expeditions have been conducted including six in Sikkim, six in Ladakh, one in Himachal Pradesh and two in Jammu and Kashmir.

Something more from report:

2.1 INTRODUCTION

The Himalayan arc is young and tectonically active, formed as a result of massive collision between Eurasia and the northward-drifting Indian plate about 50 million years ago (Patriat and Achach,1984). It forms the northern limit of India. The Hindukush-Karakoram-Himalaya hosts the largest and most important glacier systems outsides the poles and is commonly referred to as **the third pole** on the earth. The changing climate associated with increased run-off and less infiltration coupled with the removal of forest cover has resulted in the depletion of the hill aquifer system in the region. Variability of monsoon rains and seasonal snow-glacier melt have often led to unpredictable flash floods, rock-falls, debris flows, avalanches, GLOFs, landslides, soil erosion resulting in the loss of human lives and property.

2.2 GEOLOGICAL SETUP

The Himalaya is a classic example of an orogenic system created by continent–continent collision (e.g., Dewey and Bird, 1970; Dewey and Burke, 1973).The Himalayan mountain range is subdivided into four principal tectonic zones, from south to north these are: the Sub-Himalaya (Shiwalik Range), the Lesser Himalaya, the Higher Himalayan Crystalline, complex and the Tethyan Himalaya (Fig. 2.1& 2.2).

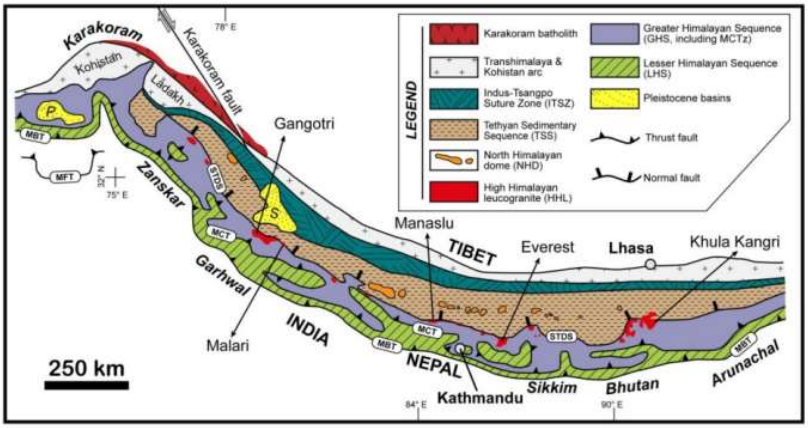


Figure 2.1: Schematic geological map of the Himalayan belt showing the main units and tectonic boundaries (modified after Law et al., 2004 and Weinberg, 2016). MFT: Main Frontal Thrust; MBT: Main

Three major river systems emerged from snow/glaciers bound area in the Himalaya:

Table 2.1: Summary of glacier and lake inventory of Indus, Ganga and Brahmaputra b

Sr. No.	Basin Characteristics	Indus Area (in km²)	Ganga Area (in Km²)	Brahmaputra Area (in Km²)	Total basin Area of all three (in Km²)
1	Sub-basins (Nos.)	18	7	27	52
2	Accumulation Area	19265.98	10884.6	12126.35	42276.94
3	Ablation Area Debris	6650.95	4844.7	5264.90	16760.55
4	Ablation Ice Exposed	6310.58	2663.5	3081.48	12055.56
5	Total no. of glaciers	16049	6237	10106	32392

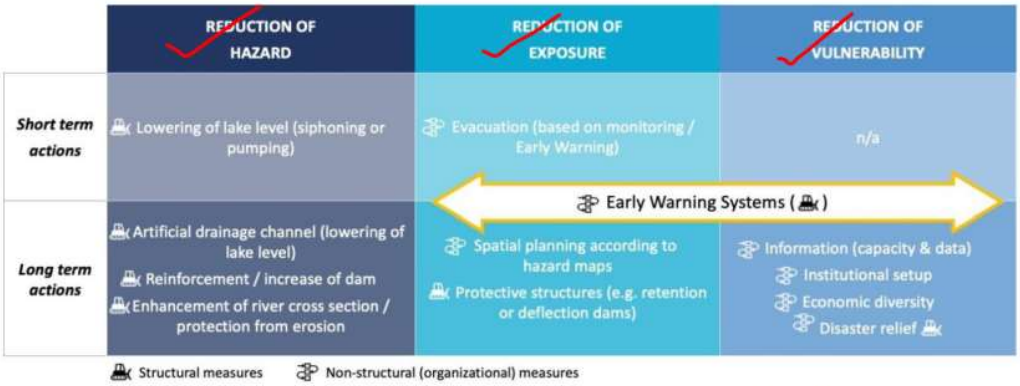


Figure 4.3: Overview of options for the risk management of glacial lakes.

61. EU Nature Restoration Law came into force

News:

PRESS RELEASE | 15 August 2024 | Directorate-General for Environment | 6 min read

Degraded ecosystems to be restored across Europe as Nature Restoration Law enters into force

The regulation sets binding targets to restore degraded ecosystems, particularly those with the most potential to capture and store carbon and to prevent and reduce the impact of natural disasters.

The Nature Restoration Law is the first continent-wide, comprehensive law of its kind. It is a key element of the **EU Biodiversity Strategy**, which sets binding targets to restore degraded ecosystems.

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.

Implementation

EU countries are expected to submit National Restoration Plans to the Commission within two years of the Regulation coming into force (so by mid-2026), showing how they will deliver on the targets.

Timeline:

62. Mars has vast ocean of water

News:

Science & Technology

Mars has vast oceans of water — it's just 11.5 km below surface

Data by NASA's InSight lander ignite new hope for life on Red Planet deep within, but underground water far beyond reach from surface

Mars has no open waters. However, **scientists have unveiled evidence of substantial water reserves hidden deep beneath the Red Planet's surface**. A new study suggests that vast amounts of water, potentially enough to fill entire oceans, may be trapped between 11.5 and 20 kilometres below the Martian soil.

The discovery has renewed hopes of finding life on the planet. The amount of groundwater could cover the entire planet to a depth of 1-2 kilometres, the study *published in journal Proceedings of the National Academy of Sciences noted.*

What scientists say?

The expert went on to say that life can be found in deep mines and at the bottom of the ocean. "We haven't found any evidence for life on Mars, but at least we have identified a place that should, in principle, be able to sustain life," he added.

Many billion years ago, Mars' atmosphere was dense and warm enough to form rivers, lakes, and perhaps even oceans of water.

As the planet lost its atmosphere, it turned into its current cold, arid desert state. Martian oceans are thought to have vanished more than three billion years ago.

The new study analysed data from National Aeronautics and Space Administration's InSight lander launched to Mars in 2018. Its goal was to investigate the Martian interiors and atmosphere, and it recorded invaluable information. The mission ended in 2022.

63. About 4D printing

Read:

WHAT IS 4D PRINTING?

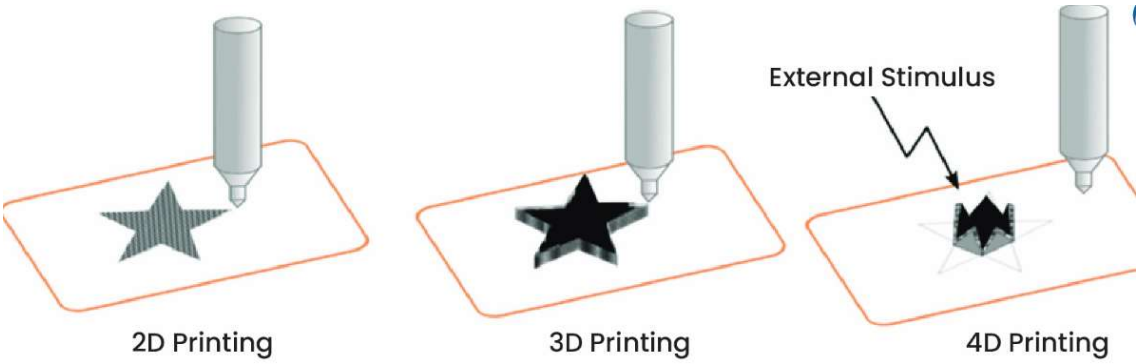
4D printing uses **3D printers** to create *live* three dimensional objects without wires or circuits. It does so by using intelligent materials, which can be programmed to **change shape, colour or size when they receive an external stimulus.**

Such is the case with **hydrogel resins, active polymers or even live tissues.** They are printed in 3D with a specific design that evolves over time and when in contact with **humidity, light, pressure or temperature,** among other factors, to achieve the intended finish.

4D printing makes it possible for an object, for example, to bend, repair, assemble or even disintegrate itself. It acquires a new shape or functionality on its own by reacting with the environment.

The origins of 4D printing are in the introduction of a time factor to 3D printing.

It consists of creating three-dimensional objects that adapt to the circumstances of each moment without the intervention of robots or people, only combining materials and geometry with interactions, an energy source and intelligent design.



Advantages:

1. Dynamic Functionality: By creating adaptive structures beyond the capabilities of traditional 3D printing.
2. Material Efficiency: By reducing wastages.
3. Complex Design fabrication: Stereo lithography 4D technique fabricates complex designs efficiently.

4D printing is destined to revolutionise the industry. These are some of its possible achievements:

- Medicine and surgery

In 2015, a medical team from the University of Michigan saved the lives of three babies with respiratory problems by inserting a 4D printed implant. This polycaprolactone device, designed to fit each patient, was designed to adapt its size to the child's growth and to dissolve itself when no longer necessary.

At present, the use of **4D printing in ultrasound scans** allows, for example, to know more precisely the structural and functional development of the nervous system of the foetus.

- Clothing and footwear

4D printing allows the manufacture of clothing that adapts to the body's shape and movement. The **U.S. military** is testing, for example, **uniforms that change colour depending on the environment,** or that regulate perspiration depending on the soldier's pulse or environment temperature.

- Aeronautics and automotive

The **NASA** has developed an **intelligent metallic fabric** with 4D printing. This fabric, which is already used for astronaut suits due to its insulating nature, **could also be used to protect spacecraft and antennas against the impact of meteorites.** Meanwhile **Airbus** is testing **materials that react to heat** to cool its aircraft engines.

Construction, military, healthcare, and manufacturing are the forefront industries exploring the 4D space.

64. How Unified Pension Scheme differ from the Old and New Pension Scheme?

Read:

How does this compare to other pension schemes?

	Old Pension Scheme (OPS)	National Pension Scheme (NPS)	Unified Pension Scheme (UPS)
Guaranteed pension	Yes	No	Yes
Pension amount	50% of last drawn basic pay + DA	Market-linked, depends on fund performance	50% of average basic pay over the last 12 months
Government contribution	Not applicable	14% of basic pay + DA	18.5% of basic pay + DA
Employee contribution	Not applicable	10% of basic pay + DA	10% of basic pay + DA
Inflation protection	Yes	No	Yes
Lump sum payment	No	No	1/10th of the monthly pay (basic + DA) for every 6 months of service completed
Minimum pension*	₹9,000	No	₹10,000

Understand with example:

To understand how much pension you could receive, Krishan Mishra, CEO of FPSB India, helps us break down the calculation for Ashish, a 42-year-old government employee earning Rs 9 lakh annually, with a basic pay of Rs 7.8 lakh. The amount he would get under each scheme varies:

Old Pension Scheme (OPS)

Under the OPS, your pension is calculated as 50% of your last drawn basic pay. For Ashish:

Basic pay: Rs 7.8 lakh per annum

Monthly basic pay: Rs 780,000 ÷ 12 = Rs 65,000

Pension: 50% of Rs 65,000 = Rs 32,500 per month

So, under the OPS, Ashish would receive a monthly pension of approximately Rs 32,500.

National Pension System (NPS)

The NPS works differently, with your pension depending on the accumulated corpus. Here's how it plays out:

Employee contribution: 10% of basic pay = Rs 78,000 per year

Employer contribution: 10% of basic pay = Rs 78,000 per year

Total annual contribution: Rs 156,000

Assumed return on investment: 8% per annum

Corpus after 18 years: Using compound interest, the corpus at retirement would be approximately Rs 6.9 million.

From this corpus, assuming you use 40% to purchase an annuity at a 6% rate, Ashish would get:

Monthly pension: Rs 13,800

So, under the NPS, Ashish would receive a monthly pension of approximately Rs 13,800.

Unified Pension Scheme (UPS)

The UPS aims to give you the best of both worlds by combining features of OPS and NPS. Here's what you could expect:

Pension: 50% of the OPS benefit + Annuity from a smaller NPS-like corpus

For Ashish:

OPS portion: 50% of Rs 32,500 = Rs 16,250

NPS-like annuity: Rs 13,800

Adding these:

Monthly pension: Rs 16,250 + Rs 13,800 = Rs 30,050

So, under the UPS, Ashish would receive a monthly pension of approximately Rs 30,050.

How does UPS compare to NPS and OPS?

Now that you understand how much you might receive under each scheme, let's look at how the UPS stacks up against the other options.

Old Pension Scheme (OPS)

The OPS was a defined benefit scheme solely for government employees. It promised you a guaranteed pension based on 50% of your last drawn basic salary, with no employee contributions required. The government fully funded this pension and adjusted it for inflation through Dearness Allowance.

OPS is a defined benefit pension plan, which typically calculates the pension based on the last drawn salary and the years of service.

National Pension System (NPS)

The NPS, launched in 2004, offers a defined contribution scheme available to both government and private sector employees. Here, your pension amount depends on market returns, and you contribute 10% of your salary, matched by the government with a 14% contribution. At retirement, you can withdraw up to 60% of the corpus tax-free.

The main challenge with NPS is the uncertainty regarding the final pension amount due to market volatility.

Unified Pension Scheme (UPS)

The UPS seeks to harmonies the benefits of OPS and NPS into a single, more balanced scheme. It offers a hybrid model where you get a fixed benefit similar to OPS, along with a contribution-based component akin to NPS.

Former Finance Secretary T V Somanathan remarked, "*It is fiscally prudent in the sense that we will have to absorb it each year in the Union Budget within our budgeted fiscal deficit." He added that the UPS is fully funded and contributory, ensuring no burden is passed on to future governments*.

What are the challenges of OPS and NPS?

According to experts:

Old Pension Scheme (OPS)

Fiscal burden:

The OPS placed immense fiscal burden on the government due to rising liabilities, making it unsustainable in the long run, especially given demographic changes.

National Pension System (NPS)

Market volatility:

The uncertainty regarding the final pension amount due to market volatility, which can make it challenging for individuals to predict their post-retirement income.

Complexity:

The NPS is complex, particularly in understanding the various investment options, which can be confusing for employees.

No guaranteed returns:

Unlike the OPS, the NPS does not offer guaranteed returns, which can be a concern for employees looking for a stable post-retirement income.

Benefits and challenges of the Unified Pension Scheme (UPS)?

Here's what this means for both the government and you as an individual, according to FPSB India's Krishan Mishra:

Benefits for the government

Long-term fiscal sustainability:

The UPS is designed to be more fiscally sustainable in the long run compared to OPS, reducing the government's long-term liabilities.

Reduced long-term liabilities:

By capping the financial burden on the government, the UPS aims to ensure a balanced approach to pension funding.

Simplified and transparent pension structure:

The UPS simplifies the management of pensions by unifying them under a single system, which also ensures equitable retirement benefits across different sectors.

A step towards pension reforms: Mishra says the introduction of UPS is seen as a progressive step towards reforming India's pension system.

Challenges for the government

Political opposition: Implementing the UPS may face political challenges, particularly from those who oppose changes to the existing pension schemes.

Logistical challenges: There will be significant logistical challenges in implementing the UPS due to the large number of people and organisations it covers.

Benefits for individuals

Increased pension security:

Compared to NPS, the UPS may offer more predictable benefits and greater security for retirees. The scheme blends the market-based returns of NPS with the fixed benefits of OPS, including features such as an assured pension, inflation indexation, family pension, and a minimum pension.

Enhanced returns:

The UPS could offer better returns by leveraging the growth potential of market investments, similar to NPS, while still maintaining a base level of guaranteed income from OPS elements.

Hybrid model with dual benefits:

The UPS offers a hybrid model that combines the stability of OPS's fixed benefits with the flexibility and self-contribution features of NPS. This provides you with both a guaranteed pension and the possibility of higher returns from market-linked investments.

Challenges for individuals

Market risk: The UPS incorporates market-based returns, which means that your pension could still be affected by market volatility, similar to NPS.

Lower guaranteed pension: While the UPS offers more security than the NPS, it might not match the full guaranteed benefits of the OPS, particularly if market conditions are unfavourable.

Limited flexibility: The hybrid nature of the UPS may limit flexibility compared to the OPS. Adapting to this new system might require a better understanding of both defined benefits and contribution-based pensions.

65. Kalamezhuthu

News:

Kalamezhuthu: When art is integral to ritual

Kalamezhuthu is woven into the mores of Bhagavati, Naga and Ayyappa temples

Updated - November 29, 2018 06:05 pm IST Published - November 29, 2018 03:36 pm IST

Kalamezhuthu is unique form of this art found only in Kerala. It is typically Indian as it is a harmonic blend of Arian, Dravidian, and Tribal tradition. **The study of this art-Kalamezhuthu will help to know more about the nature of Kerala perseverance of its tradition.**

This ritualistic art form is unique and hence distinct from modern painting systems and style drawing is made on floors and naturally made colours are used. The kalams are drawn based upon the **head-to-toe description**" given "Dhyanaslokas" and mythical contexts.

This art is mentioned and nominated as "Dhoolichitra" in ancient Sanskrit texts. It is called by name like "Alpana" in Bengal, "Kolam" in Tamilnadu and "Rangoli" in north India are forms/figures on floor using monocolour powders. They are similar to "Kalamezhuthu" in their drawing styles.

Kalamezhuthu is a two- and three-dimensional design. This art form is multi-dimensional in that it bears religious, aesthetic, and social aspects. This is a Dravidian art which is fully developed art with religious rituals.

66. Eri Silk gets Oeko-Tex Certification

News:

North Eastern Handicrafts and Handlooms Development Corporation (NEHHDC) achieves Oeko-Tex Certification for Eri Silk, marking a milestone for Northeast's unique vegan silk.


Ministry of Development of North-East Region

NEHHDC achieves Oeko-Tex Certification for Eri Silk, marking a milestone for Northeast's unique vegan silk

Posted On: 16 AUG 2024 8:31PM by PIB Delhi

This achievement further cements the silk's status as a Geographical Indication (GI) product of Assam, highlighting its authenticity and regional importance.

Oeko-Tex is a registered trade mark of the International Association for Research and Testing in the Field of Textile and Leather Ecology.

The Oeko-Tex Association was founded in March 1992 by the Austrian Textile Research Institute and the German Hohenstein Institute.

Oeko-Tex Certification

1. It is a globally recognised standard that ensures textiles are free from harmful substances and produced under environmentally friendly conditions.
2. It assesses materials for safety and sustainability throughout the production process.
3. Achieving this certification boosts consumer confidence and marketability by validating the product's adherence to rigorous health and environmental standards.

About Eri Silk:

Eri Silk is renowned as the world's only vegan silk, where, unlike other silks, the moth inside the cocoon is not killed. Instead, the moth naturally exits the cocoon, leaving it behind for us to use. This

ethical and eco-friendly process sets Eri Silk apart, making it a symbol of compassion and sustainability in the textile industry.

67. Right to disconnect

News:


New laws come into force in Australia giving workers the 'right to disconnect'

A "Right to Disconnect" rule has come into effect in Australia, offering relief to people who feel forced to take calls or read messages from employers after they finish their day's work.

The Right to Disconnect law allows employees to ignore communications after hours if they choose to, without fear of being punished by their bosses.

The law does not ban employers from contacting workers after hours. Instead, it gives staff the right not to reply unless their refusal is deemed unreasonable

Such laws are absent in India, leaving employees vulnerable to after-hours work pressure.

68. 'Vigyan Dhara': Ministry of Science and Technology

News:


Cabinet approves the Department of Science and Technology scheme namely 'Vigyan Dhara'

Posted On: 24 AUG 2024 7:28PM by PIB Delhi

The Union Cabinet, chaired by the Prime Minister Shri Narendra Modi, **approved continuation of the three umbrella schemes, merged into a unified central sector scheme namely 'Vigyan Dhara'** of Department of Science and Technology (DST).

The scheme has three broad components:

1. Science and Technology (S&T) Institutional and Human Capacity Building,
2. Research and Development and
3. Innovation, Technology Development and Deployment.

The proposed outlay for the implementation of the unified scheme 'Vigyan Dhara' is Rs.10,579.84 crore during the 15th finance Commission period from 2021-22 to 2025-26.

The merger of the schemes into a single scheme would enhance efficiency in fund utilization and establish synchronization among the sub-schemes/programs.

The primary objective of the 'Vigyan Dhara' scheme **is to promote S&T capacity building as well as research, innovation and technology development** towards strengthening the Science, Technology and Innovation ecosystem in the country.

Implementation of the scheme will strengthen the S&T infrastructure of the country by fostering well-equipped R&D labs in the Academic Institutions.

59. Tundra transformation: Rising temperatures turning Arctic green

News:

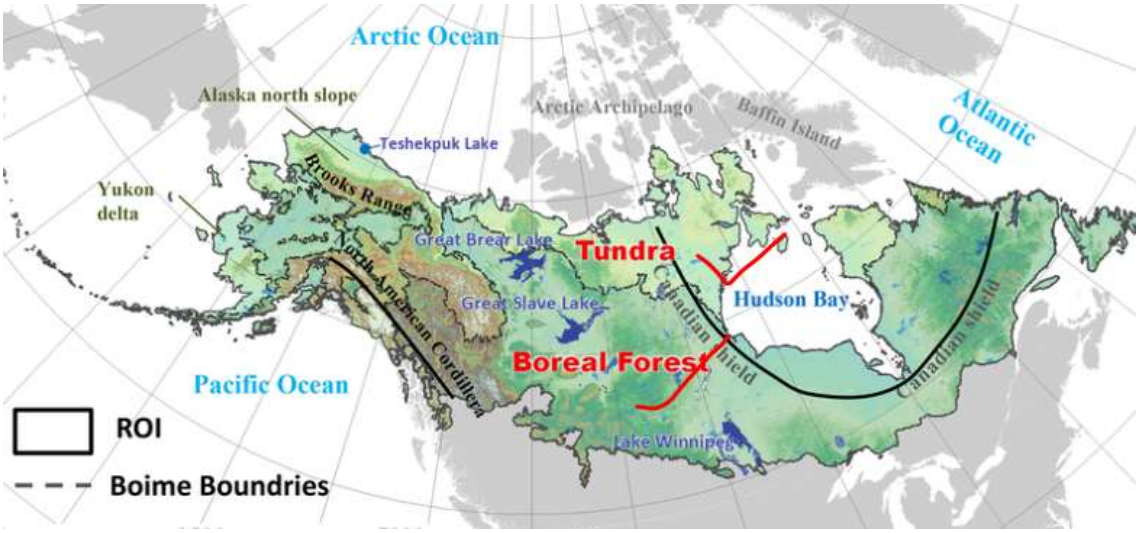
Tundra transformation: Rising temperatures turning Arctic green, Nasa Reports

Boreal forests, home to evergreens such as pine, spruce, and fir, generally grow between 50 and 60 degrees north latitude.

Using millions of data points from the Ice, Cloud, and land Elevation Satellite 2 (ICESat-2) and Landsat missions, Nasa scientists have found that tundra landscapes are becoming taller and greener.

The boreal forests, which span large parts of Alaska, Canada, Scandinavia, and Russia, **are witnessing a northward migration of trees and shrubs into traditionally tundra regions**. This phenomenon is expected to persist for at least the next 80 years.

Boreal forests, home to evergreens such as pine, spruce, and fir, generally grow between 50- and 60-degrees north latitude.

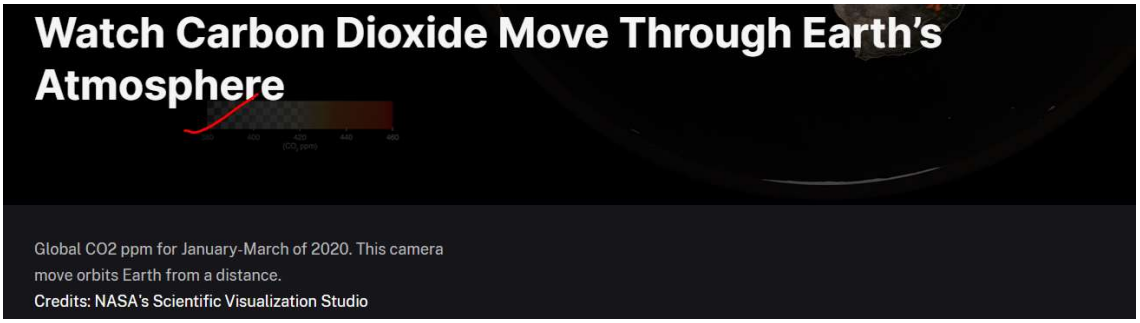


The tundra, with its permafrost and short growing season, has historically supported only shrubs, mosses, and grasses. **However, the boundary between these two biomes is becoming increasingly blurred.** High-latitude plant growth is moving northward, transforming previously sparse **tundra into more densely vegetated areas.**

This increased vegetation could potentially offset some CO2 emissions by absorbing more through photosynthesis. However, the darker vegetation may also absorb more sunlight, accelerating permafrost thawing and releasing CO2 and methane stored in the soil for millennia.

70. Nasa model shows how climate-threatening carbon dioxide moves across India

News:



NASA has released a mew high-resolution model that visualises the movement of carbon dioxide across the globe, including over India, offering unprecedented insights into the dynamics of this crucial greenhouse gas.

The model, created by NASA's Scientific Visualisation Studio using the Goddard Earth Observing System (GEOS), provides a detailed look at CO2 concentrations from January to March 2020.

The map clearly shows that in China, the United States, and India, **most emissions originated from power plants, industrial facilities, and vehicles.**

In contrast, Africa and South America's emissions were largely due to fires, including those related to land management, agricultural burns, and deforestation.

As per the NASA, the concentration of CO2 in the atmosphere has increased from about 278 parts per million in 1750 to 427 parts per million in May 2024.

This new model provides valuable data for understanding and potentially mitigating the impact of CO2 emissions on our planet's climate.

Why it matters?

All this carbon dioxide isn't harmful to air quality. In fact, we need some carbon dioxide to keep the planet warm enough for life to exist.

But when too much CO2 is pumped into the atmosphere, the Earth warms too much and too fast. That's what has been happening for at least the past half century. The concentration of carbon dioxide in the atmosphere increased from approximately 278 parts per million in 1750, the beginning of the industrial era, to 427 parts per million in May 2024.

71. India's first Reusable Hybrid Rocket named RHUMI-1 launched

News:


Site Admin | August 24, 2024 1:56 PM

First Reusable Hybrid Rocket Of India RHUMI-1 Launched From Chennai

India launched its first reusable hybrid rocket 'RHUMI- 1', **developed by the Tamil Nadu-based start-up Space Zone India with Martin Group,** from Thiruvidandhai in Chennai on Saturday (August 24, 2024).

Space Zone India is an aero-technology company in Chennai that aims to provide low-cost, long-term solutions in the space industry.

The rocket, carrying 3 Cube Satellites and 50 PICO Satellites, was launched into a suborbital trajectory using a mobile launcher. These satellites will be collecting data for research purposes on Global warming and Climate change.

The RHUMI-1 rocket combines the advantages of both liquid and solid fuel propellant systems to improve efficiency and reduce operational costs.

The RHUMI Rocket is equipped with a generic-fuel-based hybrid motor and electrically triggered parachute deployer.

72. India- Singapore Trade

First thing is checking the trade form Ministry of commerce website, *bilkul* original and updated data:

Dated: 31/08/2024
Values in US $ Millions

Country / Region: SINGAPORE

S.No.	\Year	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024
1.	**EXPORT**	8,922.66	8,675.50	11,150.61	11,992.94	14,414.27
2.	%Growth		-2.77	28.53	7.55	20.19
3.	India's Total Export	313,361.04	291,808.48	422,004.40	451,070.00	437,072.03
4.	%Growth		-6.88	44.62	6.89	-3.10
5.	%Share	2.85	2.97	2.64	2.66	3.30
6.	**IMPORT**	14,746.78	13,304.92	18,962.19	23,595.35	21,199.25
7.	%Growth		-9.78	42.52	24.43	-10.15
8.	India's Total Import	474,709.28	394,435.88	613,052.05	715,968.90	678,214.77
9.	%Growth		-16.91	55.43	16.79	-5.27
10.	%Share	3.11	3.37	3.09	3.30	3.13
11.	**TOTAL TRADE**	23,669.44	21,980.41	30,112.80	35,588.29	35,613.52
12.	%Growth		-7.14	37.00	18.18	0.07
13.	India's Total Trade	788,070.32	686,244.36	1,035,056.45	1,167,038.89	1,115,286.81
14.	%Growth		-12.92	50.83	12.75	-4.43
15.	%Share	3.00	3.20	2.91	3.05	3.19
16.	**TRADE BALANCE**	-5,824.11	-4,629.42	-7,811.58	-11,602.41	-6,784.98
17.	India's Trade Balance	-161,348.24	-102,627.40	-191,047.65	-264,898.90	-241,142.74

Major exported items from India to Singapore:

India exported 5,190 commodities to Singapore in FY23.

Major exported items from India to Singapore include **petroleum products (US$ 4.29 billion), engineering goods (US$ 2.46 billion), organic and inorganic chemicals** (US$ 670 million), gems and jewellery (US$ 495 million), electronic instruments (US$ 392 million) during April- December 2023.

Major imported items by India from Singapore.

India imported 4,147 commodities from Singapore in FY23.

Major items imported by India from Singapore include **electrical machinery and equipment and parts thereof (US$ 3.00 billion)**, petroleum products (US$ 2.37 billion), nuclear reactors, boilers, machinery, and mechanical appliances; parts thereof (US$ 2.24 billion), plastic and articles thereof (US$ 889 million), organic chemicals (US$ 888 million) from April- November 2023.

Framework of Relationship:

Key agreements include Comprehensive Economic Cooperation Agreement (CECA (2005), Double Taxation Avoidance Agreement (1994); Mutual Legal Assistance Treaty (2005) etc.

International forums: Both are members of forums like East Asia Summit, G20, Commonwealth, IORA (Indian Ocean Rim Association), and IONS (Indian Ocean Naval Symposium).

73. Ministry of Education (MoE) defines Literacy and Full Literacy under New India Literacy Programme (NILP)

News:

Education Ministry defines 'literacy,' 'full literacy'

In a letter addressed to States, School Education Secretary calls for striving to reach full literacy by year 2030; adult literacy programme gets renewed push

Updated - August 26, 2024 09:29 pm IST Published - August 26, 2024 09:20 pm IST - New Delhi

Always start from background which led to the existence of Programme (here NILP)

2. The National Education Policy 2020 (NEP 2020), the first education policy of 21st Century was formulated and released on 29th July 2020.

2.1 The NEP 2020 refers to Adult Education and Lifelong Learning at para 21.4, which states,

> *"Strong and innovative government initiatives for adult education in particular, to facilitate community involvement and the smooth and beneficial integration of technology - will be effected as soon as possible to expedite this all-important aim of achieving 100% literacy".*

2.1.1 Coupled with these recommendations of NEP-2020 on Adult Education, the Sustainable Development Goal (SDG) 4.6 of the United Nations mandates that

> *"By 2030 ensure that all youth and adults, both men and women, achieve literacy and numeracy".*

It is therefore imperative that the country should eliminate illiteracy and achieve 100% literacy by 2030.

2.2 The Government of India has approved **New India Literacy Programme (नव भारत साक्षरता कार्यक्रम)**, a new scheme of **Education For All** (earlier termed as Adult Education) for the period of FYs 2022-2027 to cover all the aspects of Adult Education to align with National Education Policy 2020 and Union Budget Announcements FY 2021-22. The financial outlay for five years' period will be 1037.90 crore out of which Rs.700 crore is Central share and Rs.337.90 is State share.

About news Definition of literacy and full literacy

Literacy:

May be understood as the ability to read, write, and compute with comprehension, i.e. to identify, understand, interpret, and create along with critical life skills such as digital literacy, financial literacy etc.

Full literacy:

To be considered equivalent to 100% literacy, will be achieving 95% literacy in a State/UT that may be considered as equivalent to fully literate.

Criteria for literacy certification:

Non-literate person may be considered as literate under the NILP, when she/he has been declared literate after taking the Foundational Literacy and Numeracy Assessment Test (FLNAT).

The FLNAT is held in all districts of each participating State/UT, with the District Institutes of Education and Training (DIETs) and Government/aided schools serving as test centres.

The assessment comprises three subjects - Reading, Writing, and Numeracy - each carrying 50 marks, totaling 150 marks. This test is developed to evaluate the foundational literacy and numeracy skills of registered non-literate learners.

Significant challenge associated with literacy in India:

According to the Census 2011, with 25.76 crore non-literate individuals in the 15 years and above age group, comprising 9.08 crore males and 16.68 crore females.

Despite the progress made under the Saakshar Bharat programme, which certified 7.64 crore individuals as literate between 2009-10 and 2017-18, an estimated 18.12 crore adults in India remain non-literate.

Non-literate individuals face disadvantages in various aspects of life such as financial transactions, job applications, comprehension of media and technology, understanding of rights and participation in higher productivity sectors.

74. Climate change: Zambia to shut down hydropower plant as Kariba dries up

News:

Climate change: Zambia to shut down hydropower plant as Kariba dries up

In a development that highlights the harsh realities of climate change, Zambia says its mainstay power station will be shut on September 14 due to lack of water

Climate change-related droughts have resulted in a significant drop in water levels on Lake Kariba to the point where there is no longer enough water for hydropower generation.

The lake, which is shared by Zambia and Zimbabwe, is on the Zambezi River, one of Africa's main rivers whose catchment areas have suffered from climate change-related droughts over the past few years.

The southern African region is currently reeling from the effects of a severe El Nino-induced drought. These droughts and heightened evaporation from increased heat have caused the lake's water levels to drop to record lows.

75. Why saline lakes are dangerous for the world's water resources?

Read:

When it comes to inland surface water bodies, saline lakes are unique. They make up 44 per cent of all lakes worldwide and are found on every continent including Antarctica. These lakes' existence depends on a delicate balance between a river basin's water input (precipitation and inflows) and output (evaporation and seepage).

The reason a lake turns saline is often because it doesn't have a consistent stream outlet, leading to a build-up of dissolved salts from water inflows. The water levels of saline lakes are naturally unstable and these lakes are generally susceptible to any disturbance.

This heightened sensitivity makes saline lakes more responsive than freshwater lakes to natural and human-caused factors. The main cause of change in a saline lake is disturbances in its water balance. These can be the result of natural or human-induced factors that are local, such as droughts, pollution, and upstream water diversions, or global, such as climate change, decreasing precipitation and increasing temperature.

Unsurprisingly, many of the world's saline lakes are shrinking rapidly, a major warning about the sustainability of regional water resources.

How are saline lakes changing?

There have always been fluctuations in saline lakes. Unfortunately, more lasting changes have become more common in recent years due to regional human activities and global climate change.

Most lakes have been shrinking and their water quality has declined. In permafrost regions of the Arctic and the Tibetan Plateau, however, some salt lakes have expanded due to areas of ice melting in a warming climate.

Changes in saline lakes pose significant challenges. They can endanger local ecosystems and industries, threaten public health and cause broader socio-economic harm.

Iran's Lake Urmia is a good example. Until a few decades ago, Lake Urmia was one of the world's largest saline lakes, but it shrunk rapidly due to unsustainable human activities. The resulting problems include a decline in tourism, dust and salt storms, falling agricultural productivity and a loss of biodiversity.

The Aral Sea, once the world's fourth-largest inland water body, is another tragic example. Since the 1960s it has shrunk to a fraction of its former size largely due to poorly planned irrigation development in the region.

The consequences have been disastrous. Despite many efforts, it has not been possible to restore the lake to its former glory.

76. Himachal Pradesh: Minimum Marriage Age Raised to 21

News:

Himachal Pradesh has passed a Bill to raise the minimum marriage age for women from 18 to 21 years, amending the Prohibition of Child Marriage (PCM) Act.

Himachal Pradesh raises women's marriage age from 18 to 21: What's next?

The Bill seeks to eliminate the age distinction between men and women in the definition of a child, ensuring that both genders are treated equally under the law

The **Prohibition of Child Marriage (Himachal Pradesh Amendment) Bill, 2024, was passed by a voice vote,** marking a significant step towards gender equality and women's empowerment in the state.

The Bill amends the Prohibition of Child Marriage (PCM) Act, 2006, which was enacted by Parliament. The amendment seeks to eliminate the age distinction between men and women in the definition of a child, ensuring that both genders are treated equally under the law.

Amendments and their impact

The Bill introduces key amendments to the PCM Act.

a. Firstly, it redefines a 'child' as any individual, male or female, who has not completed 21 years of age.
b. This removes the previous legal distinction where women were considered adults at 18, while men were considered adults at 21.
c. The Bill also amends the definition of 'child marriage' to ensure it applies universally within Himachal Pradesh, overriding any conflicting laws, customs, or religious practices that may allow minors to marry.
d. This makes the new legal marriage age binding on all residents, regardless of their cultural or religious background.
e. Additionally, the Bill extends the timeframe for individuals to file a petition to annul a child marriage. Previously, individuals had up to two years after reaching adulthood (20 years for women and 23 years for men) to file such a petition.
f. The new amendment extends this period to five years, giving women and men the right to annul their marriages until the age of 23.

Background:

1. In India, the practice of child marriage was first legally prohibited through the Child Marriage Restraint Act, 1929 (also called Sarda Act) (legal age G = 14 years and B = 18 years)
2. This Act was amended in 1978 to increase the minimum age to 18 years for females, and 21 years for men.
3. **The Prohibition of Child Marriage Act, 2006 replaced the 1929 Act, with the same minimum age limits.**

What the law says?

1. Currently, the law prescribes that the minimum age of marriage is 21 and 18 years for men and women, respectively.
2. For Hindus, Section 5(iii) of the Hindu Marriage Act, 1955 sets 18 years as the minimum age for the bride and 21 years as the minimum age for the groom. Child marriages are not illegal but can be declared void at the request of the minor in the marriage.
3. In Islam, the marriage of a minor who has attained puberty is considered valid under personal law.
4. The Special Marriage Act, 1954 and the Prohibition of Child Marriage Act, 2006 also prescribe 18 and 21 years as the minimum age of consent for marriage for women and men respectively.

77. Arighat: Nuke Powered submarine

News:

Defence Minister set to commission India's second nuclear-powered submarine in Visakhapatnam

The commissioning of the second nuclear submarine is expected to be done in presence of the top defence, national security and military officials

Updated - August 29, 2024 01:44 pm IST Published - August 29, 2024 09:50 am IST - New Delhi

Things to know about INS Arighat:

a. The INS Arighat is "significantly more advanced" than its predecessor, INS Arihant, due to the indigenous technological advancements incorporated into it.
b. Both the INS Arihant and the INS Arighat are **powered by 83 MW pressurized light-water nuclear reactors**, enabling them to remain submerged for longer durations compared to conventional diesel-electric submarines, which need to surface regularly to charge their batteries.
c. Like its predecessor, the INS Arighat has four launch tubes in its hump. It can carry up to 12 K-15 **Sagarika submarine-launched ballistic missiles (SLBMs),** each with a range of 750 kilometres (km), or four K-4 SLBMs with a range of 3,500 km.
d. The INS Arighat, with a displacement of around 6,000 tonnes, is reportedly capable of achieving a **maximum speed of 12-15 knots** (22-28 km/h) on the surface and up to 24 knots (44 km/h) when submerged.
e. Although more advanced than its predecessor, the **INS Arighat belongs to the Arihant class of submarines**, with the name of the class derived from the Sanskrit term meaning 'Destroyer of the Enemy'.
f. The INS Arighat will complement the INS Arihant in enhancing India's nuclear triad, which refers to the ability to launch nuclear weapons from land, air, and sea.
g. **Smaller than foreign counterparts**: For instance, China operates six Jin-class submarines equipped with JL-3 missiles capable of reaching 10,000 km.

The third nuclear-powered INS Aridhaman, which is said to be bigger and more sophisticated and can weigh around 7,000 tonnes, is also under construction.

78. Mass Wasting in Sedongpu Gully of Tibet

Why in the news?

Frequent mass wasting in Tibet a cause for worry in India PREMIUM

The geological event in the Sedongpu Gully catchment draining into the Yarlung Tsangpo River, upstream of the Brahmaputra in Assam, has been happening more often since 2017

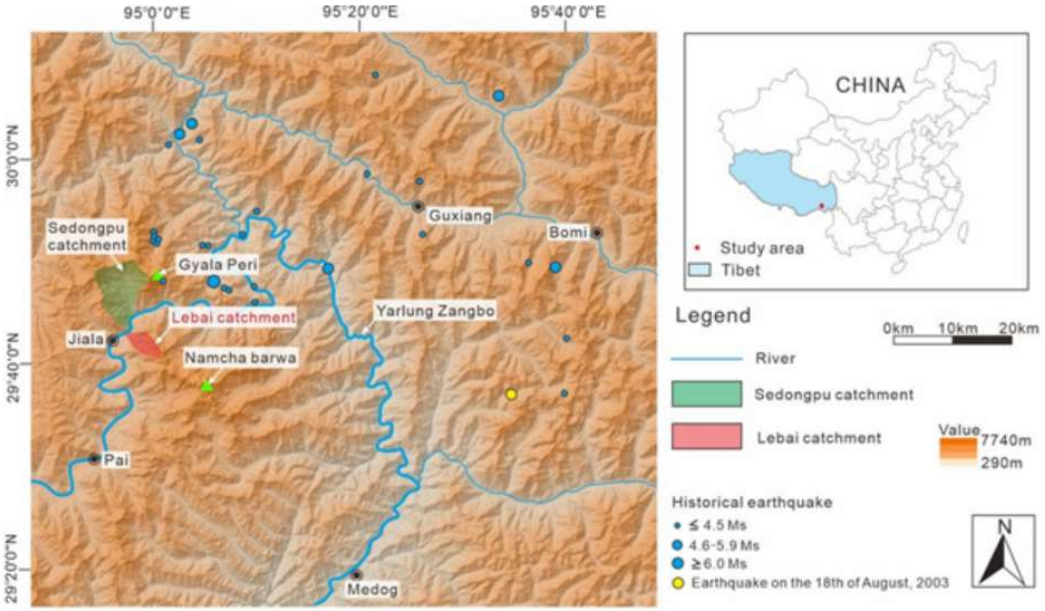
Updated - August 28, 2024 12:19 pm IST Published - August 26, 2024 08:30 am IST - Guwahati

Geological events have been on the rise since 2017 in the Sedongpu Gully watershed drained by the Yarlung Tsangpo River on the Brahmaputra in Assam.

A recent study has highlighted the high frequency of pollution, especially since 2017, in Sedongpu Bay in the Tibetan Plateau.

More about the news

a. These events are associated with extreme heat waves in the region, where temperatures rarely exceeded 0º C prior to 2012.
b. Mass dissipation is the movement of rocks and soil down a slope by gravity. Flow caused by splashes, crowd movement, or both.
c. Studies suggest that this change could have a negative impact on India, especially on the Northeast region.



Sedongpu Gully:

It is located in the Sedongpu Glacier and its valley. The valley is 11 kilometers long and covers an area of 66.8 square kilometres. Near Great Bend, it flows into the Yarlung Zangbo (Tsangpo) River.

What is Mass Wasting?

Mass wasting is the downslope movement of rock, soil, and debris under the influence of gravity. It includes various types of slope movements such as rock falls, slumps, and debris flows.

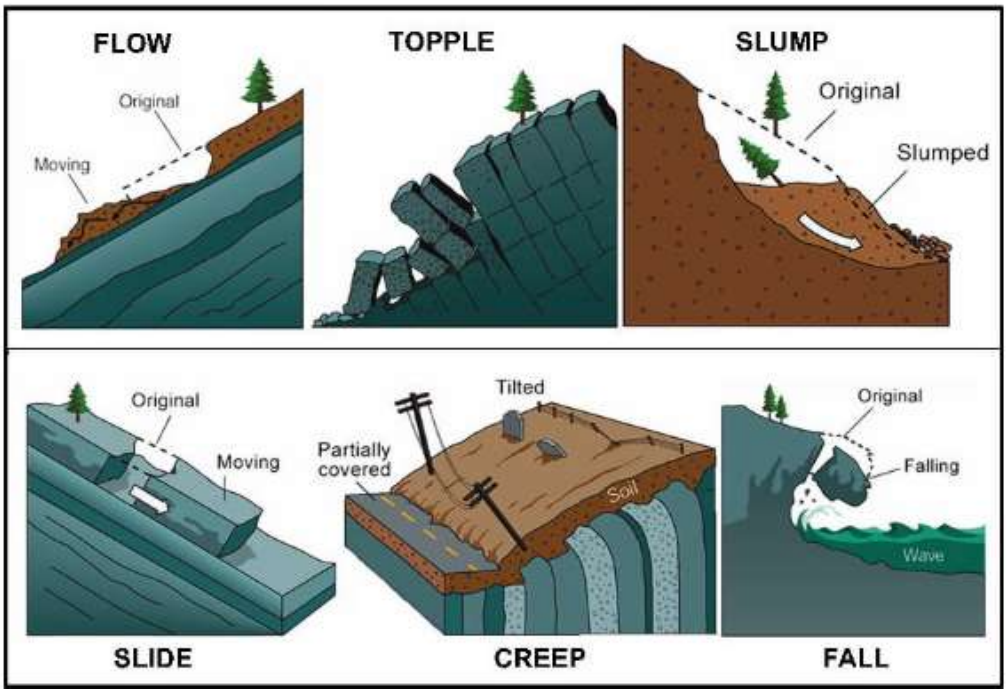
Key Triggers for Mass Wasting:

Heavy rainfall can saturate soil, increasing its weight and making it more prone to movement.

a. Quick melting of snow can add significant amounts of water to the soil, leading to instability.
b. Earthquakes (Seismic activity) can shake the ground and initiate landslides.
c. Volcanic Eruption can destabilise slopes through eruptions and associated seismic events.
d. Erosion by water bodies can undercut slopes and lead to mass wasting.

Types of Mass Wasting Events:

a. Rock Fall or Topple: This involves the falling, bouncing, and rolling of rock debris down a slope. It can occur suddenly and with significant impact.
b. Landslides and Rock Slides: These events involve large masses of soil and rock sliding down a slope.
c. Debris Flows: A debris flow is a rapid downslope movement of water-saturated rock debris and soil, resembling wet cement. It moves quickly and can be very destructive.
d. Avalanche: An avalanche is a sudden mass movement of rock or ice under gravity. It can occur in both mountainous and glacial regions.
e. Slope Creep: This is a gradual, slow movement of soil and rock down a slope, often imperceptible over short periods but significant over longer timescales.



79. A new 'AI scientist' can write science papers without any human input.

News:

Science & Technology

A new 'AI scientist' can write science papers without any human input. Here's why that's a problem

A scientific ecosystem where artificial intelligence systems are key players raises fundamental questions about the meaning and value of this process and what level of trust we should have in AI scientists

AI Scientist', created by a team at Tokyo company Sakana AI, performs **the full cycle of research from reading the existing literature on a problem and formulating hypothesis for new developments to trying out solutions and writing a paper. AI Scientist even does some of the job of peer reviewers and evaluates its own results.**

In simple language: It is an artificial intelligence system they claim can make scientific discoveries in the area of machine learning in a fully automated way.

Using **generative large language models (LLM)** like those behind ChatGPT and other AI chatbots, the system can brainstorm, select a promising idea, code new algorithms, plot results and write a paper summarizing the experiment and its findings, complete with references.

Learn Large Language Models here.

80. Target 3 "beyond 30x30"

News:

Wildlife & Biodiversity

As world gears up for this year's biggest biodiversity talks, what progress have we made towards global ambitions on protected areas?

Protecting 30% of the planet is one step on the ambitious pathway to reverse the loss of biodiversity

Target 3 of the Kunming-Montreal Global Biodiversity Framework (GBF) aims to protect 30% of the Earth's lands and waters by 2030.

With only six years left to meet the target, the focus is on evaluating current progress, addressing challenges, and preparing for upcoming discussions at the 16th Conference of the Parties (COP16) to the Convention on Biological Diversity (CBD).

What is Target 3 "beyond 30x30"?

Target 3 is a global commitment under the Kunming-Montreal GBF, aiming to protect 30% of the Earth's terrestrial, freshwater, and marine environments by 2030.

Components: Beyond the 30% coverage, Target 3 includes ensuring that protected areas and other effective area-based conservation measures (OECMs) are:

1. Geographically Well-Connected: Ensuring ecological networks and connectivity.
2. Representative of Biodiversity: Covering all types of ecosystems and species.
3. Effectively Managed: Ensuring proper governance and management.
4. Equitably Governed: Respecting the rights of Indigenous Peoples and local communities.
5. Inclusion of Indigenous Territories: Recognizing Indigenous and traditional territories as part of the target and ensuring actions are taken with respect for Indigenous rights.

In total, 118 countries have joined a High Ambition Coalition to deliver on 30×30's ambitious targets. INDIA has also joined the Coalition.

81. Unified Lending Interface (ULI)

News:

RBI to launch Unified Lending Interface to transform lending space: Das

There should not be in any rush to roll out system-wide CBDC before one acquires a comprehensive understanding of its impact, Das said

Building on the success of UPI, the Reserve Bank of India has introduced the Unified Lending Interface, a new platform designed to provide quick and easy credit to rural and small borrowers.

RBI Governor announced that the Unified Lending Interface (ULI), designed for seamless and quick credit access, particularly for MSMEs and farmers, is currently in the pilot stage.

If you once read this article, it will give you good insights:

A platform like UPI to enable frictionless disbursement of credit; will soon be launched nationwide

THE RESERVE Bank of India Governor Shaktikanta Das on Monday said that a nationwide launch of the Unified Lending Interface (ULI), which will happen in due course, will transform the lending space in the country just like Unified Payment Interface (UPI) transformed the retail payments ecosystem.

What is ULI?

The RBI, last August, had started a tech platform for enabling frictionless credit. Das said on Monday that this will be called the Unified Lending Interface . The initiative is still in the pilot stage, he said.

ULI aims to bring efficiency in the lending process by reducing costs, and facilitating quicker disbursement and scalability.

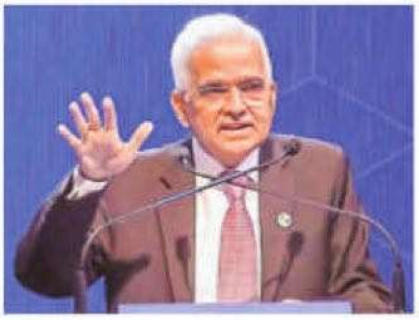
How will ULI work?

For digital credit delivery, the data required for credit appraisal are currently available with different entities like Central and State governments, account aggregators, banks, credit information companies, and digital identity authorities. However, these data sets are in separate systems, creating hindrance in frictionless and timely delivery of rule-based lending.

This is what ULI will change. The RBI chief said that the platform will facilitate a seamless and consent-based flow of digital information, including land records, from multiple data service providers to lenders. This will cut down the time taken for credit appraisal, especially for smaller and rural borrowers, and allow them to benefit from quick and seamless delivery of credit without the need for extensive documentation.

Das said that the ULI architecture has common and standardised APIs (Application Programming Interfaces, or mechanisms that enable two software components to communicate with each other) designed to ensure digital access to information from diverse sources.

"By digitising access to customer's financial and non-financial data that otherwise resided in disparate silos, ULI is expected to cater to large unmet demand for credit across sectors, particularly for agricultural and MSME borrowers," Das said.



RBI Governor Shaktikanta Das. *PTI*

Why is this development significant?

In recent years, India has embraced the concept of digital public infrastructure which encourages banks, NBFCs, fintech companies and start-ups to create and provide innovative solutions in payments, credit, and other financial activities. ULI will be a major milestone in this process.

"The 'new trinity' of JAM-UPI-ULI will be a revolutionary step forward in India's digital infrastructure journey," Das said.

JAM (Jan Dhan, Aadhar and Mobile) is a tool used by the government to transfer cash benefits directly to the bank account of beneficiaries.

UPI, launched by the National Payments Corporation of India in 2016, allows individuals to access multiple bank accounts via a single mobile application, bringing several banking features under one hood. It has played a pivotal role in the growth of retail digital payments in India, and has emerged as a robust, cost-effective and portable retail payment system which is attracting global interest today.

HITESH VYAS

How ULI is different from UPI?

1. ULI focuses on lending and credit information sharing, while UPI focuses on digital payments.

2. ULI is primarily for financial institutions and credit entities; UPI is for the general public and businesses for money transfers and payments.
3. ULI integrates multiple data sources for credit assessment; UPI integrates multiple bank accounts for seamless payments.