



Delimitation

For Prelims: [Delimitation](#), [Delimitation Commission Act 1952](#), [Constitution of India](#), [Delimitation Commission](#), [15th Finance Commission](#), [ECI](#).

For Mains: Need for Delimitation and Related Concerns.

Why in News?

Many politicians of the Southern States are raising voices over [Delimitation](#) of constituencies based on population, which they consider to be unfair.

- Southern states that followed population control policies are now facing potential disadvantages despite their success in controlling population growth.

What is Delimitation?

▪ About:

- Delimitation **means the act or process of fixing limits or boundaries** of territorial constituencies in a country or a province having a legislative body.
 - Delimitation for **LS (Lok Sabha)** and **LA (Legislative Assembly)** is different from that of [Local bodies](#).
- The Delimitation Commission Act was enacted in 1952.
 - The Delimitation Commission is appointed by the [President of India](#) and works in collaboration with the [Election Commission of India \(ECI\)](#).
- Delimitation Commissions have been set up four times — 1952, 1963, 1973 and 2002 under the Acts of 1952, 1962, 1972 and 2002.
- The first delimitation exercise was carried out by the **President (with the help of the Election Commission) in 1950-51**.

▪ History:

- The last delimitation exercise that changed the **state-wise composition of the Lok Sabha was completed in 1976** and done on the basis of the **1971 census**.
- The [Constitution of India](#) **mandates that the allocation of seats** in the Lok Sabha should be based on the population of each state so that the ratio of seats to population is as close as possible to being equal across all states. It is intended to ensure that each person's vote carries roughly the same weight, regardless of which state they live in.
 - However, this provision meant that states that **took little interest in population control could end up** with a greater number of seats in Parliament.
- To avoid these consequences, the Constitution was amended **42nd Amendment Act of 1976** froze the allocation of seats in the Lok Sabha to the states and the division of each state into territorial constituencies till **the year 2000** at the 1971 level.
- The 84th Amendment Act of 2001 empowered the government to undertake readjustment and **rationalisation of territorial constituencies** in the states on the basis of the population figures of 1991 census.
- The 87th Amendment Act of 2003 **provided for the delimitation of constituencies on the basis of 2001** census and not 1991 census.

- However, this can be done without altering the number of seats allotted to each state in the Lok Sabha.

▪ **Need:**

- To provide **equal representation to equal segments** of a population.
- Fair **division of geographical areas** so that one political party doesn't have an advantage over others in an election.
 - To follow the principle of **"One Vote One Value"**.

▪ **Constitutional Provisions:**

- **Under Article 82**, the Parliament enacts a **Delimitation Act** after every Census.
- **Under Article 170**, States also get divided into territorial constituencies as per Delimitation Act after every Census.

What are the Concerns Related to Delimitation?

▪ **Regional Disparity:**

- Disparity in representation between north and southern part of **India in the Lok Sabha** due to population as a deciding factor.
- The delimitation based solely on population **disregards the progress made by the southern states in population control** and may lead to disparities in the federal structure.
 - Despite having only 18% of the country's population, **the southern states contribute 35% to the country's GDP.**
- The northern states, which did not prioritize population control, are expected to **benefit in the delimitation process due to their higher population growth.**

▪ **Inadequate Funding:**

- After the **15th Finance Commission** used the 2011 **Census** as a basis for its recommendation, concerns were raised about southern **states losing funding and representation in parliament.**
- Previously, the 1971 Census was used as the base for funding and tax devolution recommendations to states.

▪ **Affecting the Reservations for SCs/ STs:**

- The scheduled delimitation and **reallocation of seats may result in not only a loss of seats** for southern states but also **an increase in power for political parties** with their base of support in the north.
 - This could potentially lead to a shift of power toward the north and away from the south.
- The exercise will also affect the division of seats **reserved for the Scheduled Castes and Scheduled Tribes (SC/ST)** in each state **(under Articles 330 and 332).**

What is the Delimitation Commission?

▪ **Appointment:**

- The Commission is appointed by the **President** of India and works in collaboration with the **Election Commission of India.**

▪ **Composition:**

- Retired **Supreme Court judge**
- **Chief Election Commissioner**
- Respective State Election Commissioners

▪ **Functions:**

- To determine the number and boundaries of constituencies to make the population of all constituencies nearly equal.
- To identify seats reserved for **Scheduled Castes and Scheduled Tribes**, wherever their population is relatively large.

▪ **Powers:**

- In case of a difference of opinion among members of the Commission, the opinion of the majority prevails.
- The Delimitation Commission in India is a high-power body whose orders have the force of law and cannot be called in question before any court.

Way Forward

- A Delimitation Commission should be set up to **redraw constituency boundaries based on the 2031 Census**. And a [State Reorganisation Act](#) should be enacted to **split states into smaller ones** based on the population recommendations made by the Delimitation Commission.
- There has been significant population growth in India since the **last delimitation exercise, emphasizing** the need to **address the resulting asymmetry in political representation**.
- Instead of relying solely on population as the criterion for delimitation, **other factors such as development indicators**, human development indices, and efforts in implementing family **planning programs could** be considered. This would provide a **more comprehensive and equitable representation** of states' needs and achievements.
- States that have effectively implemented family planning programs should be **acknowledged and rewarded** for their efforts.
- The guidelines for the devolution of funds **should be reviewed to incorporate a more balanced approach**.
- The growth potential of the localities proposed for the merger and their growth in population were taken as criteria for the delimitation exercise.

UPSC Civil Services Examination Previous Year Questions (PYQs)

Q. With reference to the Delimitation Commission consider the following statements: (2012)

1. The orders of the Delimitation Commission cannot be challenged in a Court of Law.
2. When the orders of the Delimitation Commission are laid before the Lok Sabha or State Legislative Assembly, they cannot effect any modification in the orders.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Ans: (c)

[Source: TH](#)

India's Commitment to UN Peacekeeping

For Prelims: [UN peacekeeping mission](#), India-ASEAN Initiative for women in UNPK operations, [International Day of UN Peacekeepers](#)

For Mains: [Role of UN Peacekeeping in resolving conflicts and promoting peace](#), India's contributions, India-ASEAN Initiative for women in UNPK operations

Why in News?

Recently, the [Indian Army](#) commemorated the **75th International Day of United Nations (UN) Peacekeepers on 29th May (which was designated by the UN General Assembly)** at the [National War Memorial](#) in New Delhi.

- **Theme 2023: 'Peace begins with me'.**
- This day holds significance as it marks the anniversary of the first [UN peacekeeping \(UNPK\) mission in 1948](#).
- Additionally, India unveiled plans to conduct two initiatives later in 2023, specifically designed to train **women personnel from South East Asia, as part of their collaboration with ASEAN in the defence sector**.

What is India-ASEAN Initiative for Women in UNPK operations?

- The 'India-ASEAN Initiative for women in UNPK operations' refers to a collaborative effort between **India and the Association of Southeast Asian Nations (ASEAN)** to promote the **participation of women in UNPK operations**.
- This initiative focuses on **providing training and support to women personnel** from ASEAN member-states who are interested in serving as peacekeepers.
- Under this initiative, India has announced two specific initiatives:
 - **Specialized courses at the Centre for United Nations Peacekeeping (CUNPK)** in New Delhi. These courses will offer targeted training in peacekeeping operations to women peacekeepers from ASEAN countries.
 - The aim is to **equip them with the necessary skills and knowledge** to effectively contribute to UNPK missions.
 - **Table Top Exercise for women officers from ASEAN**. This exercise will **simulate various scenarios and challenges faced by UN peacekeepers**, allowing participants to enhance their understanding and preparedness for UNPK operations.

What is UN Peacekeeping?

- **About:**
 - UN Peacekeeping is a vital tool employed by the [United Nations](#) to help **countries navigate the path from conflict to peace**.
 - It involves the **deployment of military, police, and civilian personnel** to regions affected by conflicts or political instability.
 - The primary objective of UN Peacekeeping is to **facilitate peace and security, protect civilians**, and support the **restoration of stable governance structures**.
 - It brings together **the UN General Assembly, the UN Security Council, the Secretariat, troop and police contributors** and the host governments in a combined effort to maintain international peace and security.
- **First Mission:**
 - The first UN peacekeeping mission was established in May 1948, when the [UN Security Council](#) authorized the deployment of **UN military observers to the Middle East** to form the United Nations Truce Supervision Organization (UNTSO) to monitor the **Armistice Agreement between Israel and its Arab neighbours**.
- **Mandates:**
 - The **mandates vary from operation to operation**, but they generally include some or all of the following elements:
 - Monitoring ceasefires, peace agreements, and security arrangements.
 - Protecting civilians, especially those at risk of physical harm.
 - Facilitating political dialogue, reconciliation, and supporting elections.
 - Building rule of law, security institutions, and promoting human rights.
 - Delivering humanitarian aid, supporting refugee reintegration, and promoting environmental sustainability.
- **Principles:**
 - **Consent of the Parties:**
 - Peacekeeping operations require the **consent of the main parties involved in the conflict**.

- Without consent, a peacekeeping operation risks becoming a **party to the conflict** and deviating from its peacekeeping role.
- **Impartiality:**
 - Peacekeepers should maintain **impartiality in their dealings** with the parties to the conflict.
 - **Impartiality does not mean neutrality**; peacekeepers should **actively execute their mandate and uphold international norms**.
- **Non-use of Force except in self-defence and defence of the mandate:**
 - Peacekeeping operations should refrain from using force, except when necessary for **self-defence** and **protection of their mandate**.
 - "Robust" peacekeeping allows the use of force with Security Council authorization and consent from the host nation and parties involved.
- **Achievements:**
 - Since its inception in 1948, UN Peacekeeping has played a crucial role in ending conflicts and promoting reconciliation in numerous countries.
 - Successful peacekeeping missions have been carried out in places like **Cambodia, El Salvador, Mozambique, and Namibia**.
 - These operations have **made a positive impact on restoring stability**, enabling the **transition to democratic governance**, and fostering economic development.

What are India's Contributions in UN Peacekeeping?

- **Troop Contribution:**
 - India has a rich legacy of contributing to UN Peacekeeping operations. It is one of the **largest troop-contributing countries**, with a history of deploying soldiers, medical personnel, and engineers to various peacekeeping missions worldwide.
 - India has contributed approximately 2,75,000 troops to peacekeeping missions so far.
- **Casualties:**
 - Indian Army soldiers have made significant sacrifices while serving in UN Peacekeeping Missions, with 179 soldiers losing their lives in the line of duty.
- **Training and infrastructure:**
 - The Indian Army has established the **Centre for United Nations Peacekeeping (CUNPK)** in New Delhi.
 - This center provides specialized training for more than 12,000 troops every year in peacekeeping operations, hosting national and international courses for potential peacekeepers and trainers.
 - CUNPK plays a crucial role in sharing best practices and enhancing the capacity of peacekeepers.
- **Women in Peacekeeping:**
 - India has taken proactive measures to promote gender equality in peacekeeping operations.
 - India has deployed **Female Engagement Teams** in **United Nations Organization Stabilization Mission** in the **Democratic Republic of the Congo** and **United Nations Interim Security Force for Abyei**, which is the **second largest women contingent after Liberia**.
 - India has also deployed **Women Military Police in United Nations Disengagement Observer Force** and women staff officers and military observers in various missions.

[Source: TH](#)

Hunger Hotspots: FAO-WFP

For Prelims: Hunger Hotspots, [FAO](#), [WFP](#), [Weather Extremes](#), [Food Insecurity](#), [Climate Change](#), [El Niño](#).

For Mains: Hunger Hotspots – FAO-WFP early warnings on acute food insecurity.

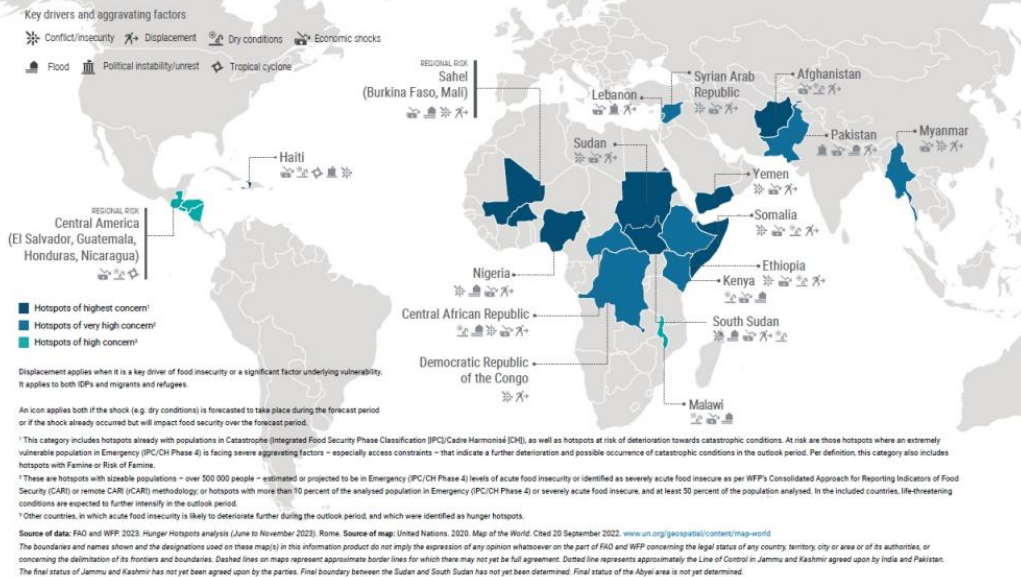
Why in News?

According to a recent Report by [Food and Agriculture Organization \(FAO\)](#) and [World Food Program \(WFP\)](#) **Hunger Hotspots – FAO-WFP early warnings on acute food insecurity**, India's neighbors, Pakistan, Afghanistan and Myanmar, are among the hunger hotspots in the world.

What are the Highlights of the Report?

- **Hot Spots with Very High Concern:**
 - There are **18 areas in 22 countries** where acute [Food Insecurity](#) may increase in magnitude and severity.
 - Pakistan, the Central African Republic, Ethiopia, Kenya, the Democratic Republic of the Congo and the Syrian Arab Republic are **hotspots with very high concern**.
 - All these hotspots have a **high number of people facing critical acute food insecurity**, coupled with **worsening drivers that are expected to further intensify life-threatening conditions** in the coming months.
- **Countries at Highest Concern Level:**
 - Afghanistan, Nigeria, Somalia, South Sudan and Yemen remain at the highest concern level.
 - Haiti, the Sahel (Burkina Faso and Mali) and the Sudan have been elevated to the highest concern levels; this is due to **severe movement restrictions of people and goods** in Haiti, as well as in Burkina Faso and Mali, and the recent eruption of [Conflict in Sudan](#).
- **Expected to Face Starvation:**
 - All the hotspots at the **highest level have populations** facing or projected to face starvation, or are at **risk of deterioration towards catastrophic conditions**, given they already have critical food insecurity and are facing severe aggravating factors.
- **New Emerging Conflicts:**
 - New emerging conflicts, in particular the eruption of conflict in the Sudan, will likely **drive global conflict trends** and impact several neighbouring countries.
 - The use of explosive ordnance and siege tactics in several hunger hotspots continues to push **people into catastrophic levels of acute food insecurity**.
- **Weather Extremes:**
 - [Weather extremes](#), such as heavy rains, tropical storms, [Cyclones](#), [Flooding](#), [Drought](#) and increased climate variability, remain significant drivers in some countries and regions.
 - The May 2023 forecast suggests an 82 % likelihood of [El Niño](#) conditions starting in the May–July 2023 period, with significant implications for several hunger hotspots.
- **Economic Shocks:**
 - Deepening economic **shocks continue to drive low- and middle-income nations** deeper into crisis.

Early warning hunger hotspots June to November 2023



What are the Recommendations?

- Urgent humanitarian action is needed to **save lives and livelihoods and prevent starvation and death** in hotspots where acute hunger is at a high risk of worsening from June to November 2023.
- Continuous monitoring of forecasts and their impact on production remains critical.
- Urgent and scaled-up **assistance is required in all 18 hunger hotspots** to protect livelihoods and increase access to food.
- This is essential to **avert a further deterioration of acute food insecurity** and malnutrition.
- In the hotspots with highest concerns, humanitarian actions are critical in preventing further starvation and death.

What is the Food and Agriculture Organization?

- About:**
 - FAO is a specialised agency of the [United Nations](#) that leads international efforts to defeat hunger.
 - [World Food Day](#) is celebrated every year around the world on 16th October. The day is celebrated to mark the anniversary of the founding of the FAO in 1945.
 - It is one of the UN food aid organisations based in Rome (Italy). Its sister bodies are the [World Food Programme](#) and the International Fund for Agricultural Development (IFAD).
- Initiatives Taken:**
 - [Globally Important Agricultural Heritage Systems \(GIAHS\)](#).
 - Monitors the [Desert Locust](#) situation throughout the world.
 - The [Codex Alimentarius Commission or CAC](#) is the body responsible for all matters regarding the implementation of the Joint FAO/WHO Food Standards Programme.
 - The [International Treaty on Plant Genetic Resources for Food and Agriculture](#) was adopted by the Thirty-First Session of the Conference of the FAO in 2001.
- Flagship Publications:**
 - The State of World Fisheries and Aquaculture (SOFIA).
 - The State of the World's Forests (SOFO).
 - [The State of Food Security and Nutrition in the World \(SOFI\)](#).
 - The State of Food and Agriculture (SOFA).
 - The State of Agricultural Commodity Markets (SOCO).

What is the World Food Programme?

- The WFP is the **leading humanitarian organization** saving lives and changing lives, delivering food assistance in emergencies and working with communities to improve nutrition and build resilience.
- It was founded in 1961 by the **FAO and [United Nations General Assembly \(UNGA\)](#)** with its headquarters in Rome, Italy.
- It is also a member of the United Nations Sustainable Development Group (UNSDG), a coalition of UN agencies and organizations aimed at fulfilling the **[Sustainable Development Goals \(SDGs\)](#)**.
- The international community has committed to end hunger, achieve food security and improve nutrition by 2030.
- WFP works in over 120 countries and territories to bring life-saving food to people displaced by conflict and made destitute by disasters.

UPSC Civil Services Examination Previous Year Question (PYQ)

Q. The FAO accords the status of 'Globally Important Agricultural Heritage System (GIAHS)' to traditional agricultural systems. What is the overall goal of this initiative? (2016)

1. To provide modern technology, training in modern farming methods and financial support to local communities of identified GIAHS so as to greatly enhance their agricultural productivity.
2. To identify and safeguard eco-friendly traditional farm practices and their associated landscapes, agricultural biodiversity and knowledge systems of the local communities.
3. To provide Geographical Indication status to all the varieties of agricultural produce in such identified GIAHS.

Select the correct answer using the code given below:

- (a) 1 and 3 only
- (b) 2 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

Ans: (b)

Source: [DTE](#)

Evergreening of Loans

For Prelims: [Reserve Bank of India \(RBI\)](#), [Stressed loans](#), [ESG \(Environmental, Social, and Governance\) norms](#), [Asset reconstruction company \(ARC\)](#)

For Mains: Evergreening of Loans, Approaches Utilized for Evergreening Loans.

Why in News?

The Governor of the [Reserve Bank of India \(RBI\)](#), recently addressed bank boards and expressed concerns about **banks adopting over-aggressive growth strategies and engaging in the evergreening of loans.**

- The governor emphasized the need for robust [corporate governance](#) and highlighted instances of concealing the true status of [stressed loans](#).

What is the Evergreening of Loans?

- **About:**
 - Evergreening loans, a **form of zombie lending**, is a practice of **extending new or additional loans to a borrower who is unable to repay the existing loans**, thereby **concealing the true status of the non-performing assets (NPAs)** or bad loans.
- **Approaches Utilised for Evergreening Loans:**
 - **Selling and buying back loans or debt instruments** between two lenders to avoid classifying them as NPAs.
 - **Persuading good borrowers to enter into structured deals** with stressed borrowers to hide their default.
 - **Using internal or office accounts to adjust the repayment obligations** of borrowers.
 - **Renewing or disbursing new loans to stressed borrowers** or related entities closer to the repayment date of earlier loans.
- **Impact:**
 - Evergreening loans can create a **false impression of the asset quality and profitability of banks and** delay the recognition and resolution of stressed assets.
 - It can also **undermine the credit discipline and moral hazard among borrowers**, and erode the trust and confidence of depositors, investors and regulators.

What is a Non-Performing Asset?

- NPA refers to a **classification for loans or advances that are in default or are in arrears on scheduled payments of principal or interest.**
- Banks are required to classify non-performing assets further into the following three categories based on the period for which the asset has remained non-performing and the realizability of the dues:
 - **Sub-standard Assets:** A substandard asset is an asset classified as an NPA for a **period less than or equal to 12 months**
 - **Doubtful Assets:** A doubtful asset is an asset that has been nonperforming for a **period exceeding 12 months.**
 - **Loss Assets:** Assets that are **uncollectible and where there is little, or no hope of recovery and that needs to be fully written off.**
- **Loan write-off Vs. Evergreening:**
 - **Loan write-offs** are a **process of removing bad loans** from the books of banks after making adequate provisions for them. **Loan write-offs do not mean that the borrowers are relieved of their repayment obligations** or that the banks stop pursuing recovery from them. Loan write-offs are done to **clean up the balance sheet of banks and reflect their true financial position.**
 - Write-off exercise has **enabled banks to reduce their non-performing assets, or defaulted loans, by Rs 10,09,510 crore (\$123.86 billion) in the last five years.**
 - Evergreening of loans, on the other hand, is a practice of extending new or additional loans to a borrower who is unable to repay the existing loans, thereby **concealing the true status of the non-performing assets (NPAs) or bad loans.**
- **Initiatives by RBI:**
 - The RBI has cautioned banks against adopting **over-aggressive growth strategies, underpricing or over-pricing of products**, concentration or lack of diversification in

- deposit or credit profile, which can expose them to higher risks and vulnerabilities.
- The RBI has also implemented various measures to support the banking sector, including **providing liquidity support, regulatory forbearance, the establishment of an [asset reconstruction company \(ARC\)](#)**, and the resolution framework.
 - However, the RBI has highlighted that these measures alone are insufficient if banks do not improve their risk management and governance practices.
- Several banks have faced penalties imposed by the **RBI for violating various norms related to [KYC \(Know Your Customer\)](#)**, customer grievance redressal, fraud reporting, etc.
 - Supervisory action has also been initiated by the RBI against some large private sector banks for governance lapses.

Note: An **Asset Reconstruction Company** is a specialised financial institution that specialises in **acquiring and resolving [non-performing assets \(NPAs\)](#)** of banks and other financial institutions. ARCs were introduced in India in the late 1990s as a response to the **increasing problem of NPAs in the banking sector**.

How can Evergreening of Loans be Controlled?

- **Enhanced Risk Assessment:** Financial institutions should adopt **robust risk assessment practices** to evaluate the creditworthiness of borrowers accurately.
 - This involves conducting thorough due **diligence, analyzing repayment capacity, and assessing the viability of the borrower's business model**. By accurately identifying potential risks, lenders can avoid the need for evergreening loans.
- **Transparent Reporting and Disclosure:** **Transparency** is crucial in preventing evergreening of loans. **Lenders should provide accurate and timely information on their loan portfolios**, including non-performing loans (NPLs) and loan restructuring.
 - Clear and transparent disclosure requirements enable regulators, investors, and other stakeholders to assess the financial health of banks and identify any potential evergreening practices.
- **Asset-liability Management:** There is a need to lay emphasis on the **importance of [asset-liability management \(ALM\)](#)**.
 - ALM involves **assessing and monitoring the potential risks arising from the maturity mismatch between assets and liabilities**, interest rate fluctuations, and other market risks.
 - Banks have been advised to promptly **interact with the media in order to dispel any misinformation or rumours on social media** that can trigger panic among depositors.
- **ESG (Environmental, Social, and Governance) Norms:** There is a **need for banks to comply with [ESG \(Environmental, Social, and Governance\) norms](#)** as they are becoming increasingly relevant for investors and stakeholders.
 - Banks should **adopt sustainable business practices, disclose their ESG performance**, and align their lending policies with national and international goals on climate change and social welfare.
 - ESG goals are a set of standards for a company's operations that force companies to follow **better governance, ethical practices, environment-friendly measures and social responsibility**.
- **Recommendations of P J Nayak Committee:**
 - According to the **Committee to Review Governance of Boards of Banks in India**, wherever significant **evergreening in a bank is detected by the RBI, penalties should be levied through cancellations of unvested stock options** and claw-back of monetary bonuses on officers concerned and on all whole-time directors, and the Chairman of the audit committee be asked to step down from the board.

UPSC Civil Services Examination Previous Year Question (PYQ)

Q. With reference to the governance of public sector banking in India, consider the following statements: (2018)

1. Capital infusion into public sector banks by the Government of India has steadily increased in the last decade.
2. To put the public sector banks in order, the merger of associate banks with the parent State Bank of India has been affected.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Ans: (b)

Source: IE

Unveiling Ancient Climate Secrets with Ladakh

For Prelims: [Deglaciation](#), [Monsoon](#), [Inter Tropical Convergence Zone \(ITCZ\)](#), [El Nino](#), [Himalayan region](#), [Climate change](#), Climate Evolution.

For Mains: Significance of Ladakh in Climate Research.

Why in News?

Scientists have made significant strides in **understanding [climate variations](#) during the transition from the last [deglaciation period](#)**, approximately 19.6 to 6.1 thousand years ago.

- By studying sediment deposits from **ancient lakes in the [Indus River valley](#) in Ladakh**, they have reconstructed climate records and shed light on the region's climate history.

What are the Major Findings of the Research?

- **Research Methodology:**
 - Scientists sampled sediment deposits from an 18-meter-thick sequence found along the **Indus River** at an altitude of 3287 metres.
 - The researchers conducted meticulous laboratory analyses on the samples, examining physical characteristics such as **colour, texture, grain size, grain composition, total organic carbon, and magnetic parameters**.
 - These parameters were used to extract information about past climate conditions from the **palaeolake sedimentary archive**.
- **Major Findings Related to Climate Evolution:**
 - Between 19.6 and 11.1 thousand years ago, a **cold arid climate dominated the region** due to the influence of **[westerly circulation](#)**.
 - From 11.1 to 7.5 thousand years ago, **[monsoon](#) forcings became the primary driver of climate**, leading to a period of strong monsoons.
 - Afterward, **orbitally controlled solar insolation** played a crucial role in shaping the

- climate by influencing the position of the [Inter Tropical Convergence Zone \(ITCZ\)](#) and the variability of atmospheric circulations.
- During the mid-Holocene (7.5 to 6.1 thousand years ago), the westerlies regained strength, coinciding with decreasing insolation, **a weakening monsoon, and enhanced [El Nino activities](#)**.
 - The study also demonstrates the **potential of using multiple physical parameters of sediments to reconstruct paleoclimate variations** (changes in Earth's climate that occurred in the geological past) with high resolution and accuracy.

What is the Significance of Ladakh in Climate Research?

- **High-altitude Environment:** Ladakh region, located in the Trans-Himalaya, serves as an environmental boundary between **North Atlantic and monsoon forces**.
 - This region is characterised by **extreme temperatures, low oxygen levels, and arid conditions**.
 - Studying the climate dynamics and changes in such high-altitude environments helps scientists **better understand the impacts of climate change on similar regions worldwide**.
- **Ideal to Study Atmospheric Circulation:** Its **geographical position makes it ideal for studying variations in atmospheric circulations**, including the westerly winds and the Indian summer monsoon.
 - Understanding the variability of these atmospheric circulations is crucial in the context of [global warming](#) and its implications for regional climate patterns.
- **Sedimentary Archives:** Among the **various sedimentary archives that exist in Ladakh**, the sediment deposits in lakes are useful in **attesting both short and long-term climatic changes**.
 - This is because **lakes have continuous sedimentation rates and preserve physical and chemical characteristics** of the sediments that reflect past environmental conditions.
- **Glacial Retreat:** The [Himalayan region](#), including Ladakh, is home to numerous glaciers that act as a crucial source of freshwater for rivers like the [Indus](#), [Ganges](#), and Brahmaputra.
 - [Climate change](#) has accelerated the retreat of these glaciers, leading to concerns about water security, changes in river flow patterns, and potential impacts on local ecosystems and communities.
 - **Ladakh provides an important location to monitor glacial changes and study the consequences of glacial retreat.**
 - Also, the **transition from a glacial to interglacial climate period** entails large-scale climate reorganisation. Understanding the dynamics during this transitional phase is crucial for **comprehending climate evolution**.
 - Mountainous regions like **Ladakh are particularly susceptible to these changes due to their unique geomorphological characteristics.**

Westerly Circulation

- It refers to the **predominant west-to-east flow of winds in the mid-latitudes of both hemispheres**.
- It is caused by the **rotation of the Earth and the temperature differences between the equator and the poles**. The westerlies play a crucial role in weather patterns and the transport of heat, moisture, and pollutants across regions.

Orbitally Controlled Solar Insolation

- It refers to the **variations in the amount of solar radiation received on Earth due to changes in Earth's orbit around the sun**.
- These orbital variations occur over long periods, such as tens of thousands of years, and can impact climate patterns.

Intertropical Convergence Zone

- The **ITCZ is a low-pressure zone near the equator** where trade winds from the northern and southern hemispheres converge.
- It is **characterised by abundant rainfall and is responsible for the formation of tropical rainforests and monsoon systems.**
 - The **ITCZ migrates north and south with the changing seasons**, following the sun's zenith position.

El Nino Activities

- **El Nino is a climate phenomenon that occurs in the tropical Pacific Ocean.** It involves the **warming of sea surface temperatures**, disrupting the normal patterns of atmospheric circulation and weather systems.
- During El Nino events, the **trade winds weaken, and warm waters from the western pacific flow eastward, altering rainfall patterns globally.** El Niño has significant impacts on weather, agriculture, fisheries, and ecosystems.

UPSC Civil Services Examination, Previous Year Question (PYQ)

Prelims

Q. 1 With reference to 'Indian Ocean Dipole (IOD)' sometimes mentioned in the news while forecasting Indian monsoon, which of the following statements is/are correct? (2017)

1. IOD phenomenon is characterised by a difference in sea surface temperature between tropical Western Indian Ocean and tropical Eastern Pacific Ocean.
2. An IOD phenomenon can influence an El Nino's impact on the monsoon.

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Ans: (b)

Q.2 Consider the following pairs (2019)

	Glacier	River
1.	Bandarpunch	Yamuna
2.	Bara Shigri	Chenab
3.	Milam	Mandakini
4.	Siachen	Nubra
5.	Zemu	Manas

Which of the pairs given above are correctly matched?

- (a) 1, 2 and 4
- (b) 1, 3 and 4
- (c) 2 and 5
- (d) 3 and 5

Ans: (a)

Exp:

- An important glacier of the Yamuna river basin is Bandarpunch glacier in the Garhwal division of the Himalayas. It is situated on the Northern slopes of Bandarpunch West, Khatling peak and Bandarpunch peak. The glacier is formed by three cirque glaciers and then joins the river Yamuna. Hence, pair 1 is correctly matched.
- Bara Shigri is the largest glacier located in the Lahaul Spiti region in Chandra Valley, Himachal Pradesh. It is a 30 km long glacier, the second longest glacier in the Himalayas after Gangotri. It flows northwards and feeds the Chenab river. **Hence, pair 2 is correctly matched.**
- Milam glacier in Munsiyari, Pithoragarh district, Uttarakhand is the source of Gori Ganga river. Gori Ganga is an important tributary of Kali River. **Hence, pair 3 is not correctly matched.**
- Siachen glacier in Ladakh is located at an altitude of roughly 5,400 meters. It is the source of the Nubra river, a tributary of the Indus river flowing into Pakistan and the Arabian Sea. **Hence, pair 4 is correctly matched.**
- Zemu glacier is the largest in the Eastern Himalayas in Sikkim. It is at the base of the Kanchendzonga and is one of the sources of the Teesta river. Teesta river is one of the tributary of the Brahmaputra river. **Hence, pair 5 is not correctly matched.**
- **Therefore, option (a) is the correct answer.**

Mains

Q. Briefly mention the alignment of major mountain ranges of the world and explain their impact on local weather conditions, with examples. **(2021)**

Q. Most of the unusual climatic happenings are explained as an outcome of the El-Nino effect. Do you agree? **(2014)**

Source: PIB

Tobacco Cultivation and Food Insecurity

For Prelims: [World Health Organization \(WHO\)](#), [Tobacco](#), [Food and Agriculture Organization](#), [Framework Convention on Tobacco Control](#), [World Food Programme](#), [World No Tobacco Day](#), [Promulgation of the Prohibition of Electronic Cigarettes Ordinance, 2019](#)

For Mains: Impact of Tobacco Farming on Global Food Crisis

Why in News?

The [World Health Organization \(WHO\)](#) has released a new report highlighting the **urgent need to prioritise food production over [tobacco cultivation](#)**.

- The report emphasises that approximately **349 million people worldwide are currently facing acute [food insecurity](#)**, while **valuable fertile land is being occupied by tobacco farming**. The tobacco industry's interference in efforts to substitute its crops exacerbates the **global food crisis**.
- **Also, [World No Tobacco Day](#), observed annually on May 31** serves as a reminder of the ongoing battle against global tobacco [epidemic](#). The theme of 2023 is **“Grow food, not tobacco”**.

Note: Food insecurity refers to a situation where individuals or communities do not have reliable **availability, accessibility, affordability, to sufficient, safe, and nutritious food** that meets their dietary needs and preferences for an active and healthy life.

How is the Global Food Crisis Related to Tobacco Farming?

- **Land Use Competition:** Both **food production and tobacco farming require land resources**.
 - Tobacco farming is prevalent in over 124 countries, occupying significant agricultural land that could be utilised for food production.
 - **This competition for arable land can limit food production** and exacerbate the global food crisis, especially in areas where food security is already a challenge.
 - The **United Nations Food and Agriculture Organization (FAO)** also warns of increasing acute food insecurity in various regions worldwide.
- **Resource Diversion:** Tobacco farming requires significant amounts of resources, including water, fertilisers, and labour.
 - The diversion of these resources to tobacco production can result in limited availability for food crops, contributing to **decreased agricultural productivity and food shortages**.
- **Financial Impact:** Tobacco farming can be **financially lucrative for farmers**, leading them to prioritise tobacco cultivation over food crops.
 - This preference for cash crops like tobacco may **reduce the incentive to grow staple food crops**, which are essential for addressing hunger and food security concerns.
- **Environmental Impact:** Tobacco farming practices can have adverse environmental effects.
 - **Deforestation, soil degradation, and water pollution** are often associated with tobacco cultivation. These environmental impacts can further strain the availability of natural resources needed for sustainable food production.
- **Health Consequences:** Tobacco use is a major public health concern, leading to numerous diseases and premature deaths worldwide. **Tobacco farming poses serious health risks to farmers**, including **exposure to pesticides and the absorption of nicotine through the skin**.
 - The health consequences of tobacco-related illnesses can indirectly impact food security by **reducing the productive workforce and placing additional burdens on healthcare systems, diverting resources away from food-related initiatives**.
 - According to the **WHO**, tobacco use kills more than **8 million people every year** and exposes millions more to second-hand smoke.

Note: Nicotine is a chemical compound found in the leaves of the tobacco plant (*Nicotiana tabacum*) and some other plants in the nightshade family. It is an **alkaloid** that is both a sedative and a stimulant.

What is the Status of Tobacco Consumption in India?

- **Status:**
 - Tobacco use is known to be a major risk factor for several **non-communicable diseases** such as cancer, cardiovascular disease, **diabetes**, and chronic lung diseases. Nearly **27% of all cancers in India are due to tobacco usage**.
 - India is also the **second largest consumer and producer of tobacco after China**.
 - Nearly **267 million adults (15 years and above) in India (29% of all adults)** are users of tobacco, according to the **Global Adult Tobacco Survey India, 2016-17**.
- **Indian Initiatives to Curb Tobacco Consumption:**
 - The **Promulgation of the Prohibition of Electronic Cigarettes Ordinance, 2019** prohibits **Production, Manufacture, Import, Export, Transport, Sale, Distribution, Storage and Advertisement of e-Cigarettes**.

- The **Government of India** launched the [National Tobacco Quitline Services \(NTOLS\)](#) which have the sole objective to provide telephone-based information, advice, support, and referrals for tobacco cessation.
- The Union Finance Minister of India announced a **16% increase in National Calamity Contingent Duty (NCCD)** on cigarettes in the [Budget 2023-24](#).
- The **Union Health Ministry of India** has announced **new regulations requiring [Over-The-Top \(OTT\) platforms](#) to display tobacco-related health warnings** during streamed content.
 - OTT platforms must attach anti-tobacco health spots at the beginning and middle of programs that display tobacco products or their use.
 - Health spots and tobacco-related warnings are already mandatory for television and films in India.

What are WHO's Actions to Address Tobacco Farming?

- The WHO emphasises the significance of the [Framework Convention on Tobacco Control \(WHO-FCTC\)](#), the **first international agreement aimed at reducing tobacco consumption** and its adverse health effects.
- WHO has partnered with the **UN's Food and Agriculture Organization (FAO)** and the [World Food Programme \(WFP\)](#) to launch the Tobacco Free Farms initiative, which aims to assist farmers in countries such as Kenya and Zambia by providing microcredit lending, knowledge, training, and support for cultivating alternative crops.

[Source: IE](#)

Foucault Pendulum

Why in News?

[India's newly inaugurated Parliament](#) building showcases a remarkable piece of scientific artistry suspended from its ceiling - **a Foucault pendulum**.

- Foucault's pendulum in the New Parliament building also represents the **spirit of scientific inquiry and scientific temper** which is enshrined in the **Article 51A of the Indian Constitution**.



What is a Foucault Pendulum?

- A **Foucault pendulum**, named after the **19th century** French physicist **Leon Foucault**, is a simple **experiment to demonstrate the [Earth's rotation](#)**.
 - It consists of a **heavy object hung from a long wire, free to swing in any direction**. When set in to-and-fro motion, the **pendulum appears to change its orientation slowly over time**, due to the relative motion between the pendulum and the rotating Earth.
- Foucault first performed this experiment publicly in **1851 at the Pantheon in Paris**, where he suspended a **28-kg iron ball from a 67-m wire**. It was the first direct visual evidence of the Earth's rotation.
 - The experiment concluded that **“pendulum does not change its plane of motion, but the ground beneath it does.”**
 - When **aligned along the Earth's axis at the north and south poles**, the pendulum's back-and-forth motion comes **back to its original plane in exactly 24 hours**.
 - At other latitudes, it takes **longer for the pendulum to return to its original orientation of swinging**. That is because **the pendulum is not aligned with the axis of rotation of the earth**.
- The rate and direction of the pendulum's apparent rotation depend on its latitude.
 - At the North Pole, it would **complete one clockwise rotation in 24 hours**.
 - At the equator, it would **not rotate at all**.
 - At other latitudes, it would rotate at **intermediate rates and directions**.

What is Special about the Pendulum in the New Parliament Building?

- The pendulum in the new Parliament building was created by the [National Council of Science Museum \(NCSM\) in Kolkata](#).
 - It is **said to be the largest such piece in India**, with a height of 22m and a weight of 36 kg.
- The pendulum hangs from a skylight at the top of the Constitution Hall, and signifies the **“integration of the idea of India with the idea of the cosmos”**.
- At the **latitude** of Parliament, New Delhi (28.6° N), it takes about **49 hours and 59 minutes** for the pendulum to **complete one clockwise rotation**.

[Source: IE](#)

RBI's Planned 'Lightweight' Payments and Settlement System

Why in News?

The [Reserve Bank of India \(RBI\)](#) recently announced plans to introduce a '**Lightweight' Payment and Settlement System (LPSS) for emergencies which was proposed in RBI's annual report for 2022-23**.

- The lightweight system **aims to provide resilience and continuity of payment and settlement systems** while ensuring efficiency during emergencies.

What is RBI's Planned LPSS?

- **About:**
 - LPSS is independent of conventional technologies and wired networks that underlie existing payment systems such as [UPI, NEFT, and RTGS](#).

- **Background:**
 - As a part of the '**Utkarsh 2.0**' initiative, RBI will put in place a resilient framework for oversight of **Centralized Payment Systems — NEFT and RTGS**.
 - It will also look to upgrade the RTGS system, including improvements to the existing ones and the introduction of new functionalities.
- **Enhancing Payment System Resilience:**
 - LPSS for emergencies ensures **resilience and continuity of payment and settlement systems** during extreme and volatile situations.
 - Conventional payment systems like UPI, NEFT, and RTGS are **vulnerable to disruptions** caused by **natural calamities or war** due to their dependence on complex wired networks and advanced IT infrastructure.
 - Disruptions in existing systems can **affect liquidity pipeline** and hamper essential payment services.
 - Lightweight system provides a **portable and easily activated solution that can be operated remotely with minimal resources**.
 - It serves as a **backup option for critical transactions**, maintaining stability and ensuring the availability of essential payment services.
- **Working Procedure:**
 - **Minimal Staff:**
 - The system will have a **bare minimum of trained staff who will handle payment** and settlement operations securely and efficiently. They will also **coordinate with government agencies, financial institutions, market participants, and service providers**.
 - **Focus on Essential Transactions:**
 - The system will process only those transactions that are crucial for maintaining the stability of the economy, such as **government and market-related transactions**.
 - Retail or individual transactions that can be deferred or conducted through alternative modes **will not be handled**.
 - **Simplified Authentication and Verification:**
 - The system will employ a simplified mechanism to **ensure the integrity and validity of transactions**. It will also maintain transaction records for **reconciliation and audit purposes**.
- **Benefits:**
 - Ensures **near-zero downtime of the payment** and settlement system during emergencies.
 - Facilitates uninterrupted functioning of essential payment services, including **bulk payments, interbank payments, and provision of cash to participant institutions**.
 - Enhances **public confidence in digital payments** and financial market infrastructure.
 - Acts as a **deterrent against malicious attacks or sabotage attempts** on existing payment systems.
- **Challenges:**
 - Requires **careful planning and coordination** among stakeholders for readiness and effectiveness.
 - Requires **testing and validation of functionality, security, and reliability before deployment**.
 - Requires **regular training and capacity building of staff**.
 - Requires **constant monitoring and evaluation of performance** and impact.

UPSC Civil Services Examination, Previous Year Question (PYQ)

Q1. With reference to digital payments, consider the following statements: (2018)

1. BHIM app allows the user to transfer money to anyone with a UPI-enabled bank account.
2. While a chip-pin debit card has four factors of authentication, BHIM app has only two factors of authentication.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Ans: (a)

Q2. Which of the following is a most likely consequence of implementing the 'Unified Payments Interface (UPI)'? (2017)

- (a) Mobile wallets will not be necessary for online payments.
- (b) Digital currency will totally replace the physical currency in about two decades.
- (c) FDI inflows will drastically increase.
- (d) Direct transfer of subsidies to poor people will become very effective.

Ans: (a)

Q3. Consider the following statements: (2017)

1. National Payments Corporation of India (NPCI) helps in promoting the financial inclusion in the country.
2. NPCI has launched RuPay, a card payment scheme.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Ans: (c)

[Source: IE](#)

Rapid Fire Current Affairs

World Multiple Sclerosis Day

The **Department of Empowerment of Persons with Disabilities (DEPwD)**, under the **Ministry of Social Justice and Empowerment**, Government of India, observed **World [Multiple Sclerosis \(MS\) Day](#) on 30th May 2023**, joining the global MS community in raising **awareness and fostering connections**. With the **theme of 'connections' for the 2020-2023** period, the MS Connections campaign aimed to build community connections, self-connections, and connections to quality care.

Multiple Sclerosis (MS) is a chronic autoimmune disease that affects the **central nervous system, including the brain and spinal cord**. It is characterized by inflammation and damage to the protective covering of **nerve fibers**, disrupting the **normal flow of electrical impulses**. This results in a wide range of symptoms, **including fatigue, difficulty with coordination and balance, muscle weakness, and problems with vision and cognition**. The **exact cause of MS is still unknown**, but it is believed to involve a **combination of genetic and environmental factors**. MS is a lifelong condition with varying degrees of severity and progression. While there is **no cure for MS**, there are

treatments available to manage symptoms, slow down the progression of the disease.

Read more: [Multiple Sclerosis](#)

Green Hue in Venice's Grand Canal



Venice's iconic **Grand Canal** recently took on a **vibrant green hue**, perplexing both residents and officials. After conducting test samples of the water, authorities confirmed that the **color was caused by fluorescein**, a chemical commonly used to **detect leaks in underwater construction**. The president of the Veneto region emphasized the need for strong responses to protect the city and its historical treasures. Although **fluorescein has low levels of toxicity**, tests have **not indicated any harm to the canal's ecosystem**. Depending on the concentration of fluorescein, it may take a few more days for the canal to **return to its normal color** as the chemical dissolves.

The Grand Canal is the main waterway of Venice, Italy, that showcases the city's rich architectural and cultural heritage. It is a popular destination for tourists and locals alike, who can enjoy its scenic views and historic landmarks by various modes of transport. The **Grand Canal is the largest and most famous canal in Venice**. It is nearly four kilometers long and **separates one half of Venice from the other**.

UAE Withdraws from Maritime Coalition amid Rising Tensions in Gulf Waters



The **United Arab Emirates (UAE)** has announced its **withdrawal from the US-led Combined Maritime Forces (CMF)**, a coalition responsible for **securing crucial and volatile Gulf waters** that play a significant role in global oil trade.

Established in 2001, the **CMF started as a partnership between 12 nations and has since expanded to include 38 partner nations**, including the UAE. While the UAE has put its participation on hold, it **remains a partner nation**.

Recent incidents, such as **Iran's seizure of tankers and a drone attack on an Israeli-owned vessel**, have intensified tensions in the region. The UAE, as a major oil exporter, emphasises its commitment to peaceful dialogue, diplomatic engagement, and the responsible safeguarding of navigation in its seas.

Read more: [Combined Maritime Forces \(CMF\)](#)

World Milk Day Celebrations and Summer Meet

The **Department of Animal Husbandry and Dairying**, in partnership with the **Agriculture Production Department of the Government of Jammu and Kashmir**, is gearing up to celebrate [World Milk Day on June 1, 2023](#). The occasion will be marked by a **Summer Meet for the [animal husbandry](#) and dairying sector**, taking place from **June 1st to 2nd** at SKICC in Srinagar, Jammu and Kashmir.

This event aims to raise awareness about the **nutritional value and advantages of milk, while also acknowledging the significant contributions of dairy farmers, processors, and consumers**. The event will review the progress of ongoing schemes, discuss outcomes, and identify mid-course corrections as necessary.

As part of the event, "**Feeding the Future: Five Days of Action for Feed and Fodder and Training of A-HELP for 2023-24**" campaign will be launched. This initiative aims to address the critical aspects of **feed and fodder management for [livestock](#) while providing training through the A-HELP program**.

In 2001, World Milk Day was established by the [Food and Agriculture Organisation of the United Nations](#) to recognize the importance of milk as a global food, and to celebrate the dairy sector. **India is the highest milk producer in the world contributing 23% of global milk production** in the year 2021-22. The top five major milk-producing states are **Rajasthan, Uttar Pradesh, Madhya Pradesh, Gujarat and Andhra Pradesh**.

Read more: [Animal husbandry](#)

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