

22nd Oct, 2024

1. India-China Border Patrol Agreement **GS 2 (International Relations)**

- **Why in News:** India and China have reached a significant agreement to restore patrolling rights to each in the **Depsang Plains and Demchok region**, these are areas where the problems are called **legacy issues**, predating the **2020 Chinese incursions**.

- **Background (The Galwan Clash Backdrop)**

- In a major escalation along the Line of Control, Indian and Chinese troops clashed in the Galwan Valley on June 15, 2020.
- This incident was the first deadly confrontation in the region since 1975 and resulted in casualties on both sides.
- The root cause is an ill-defined, **3,440km (2,100-mile)-long disputed border**. Rivers, lakes and snowcaps along the frontier mean the line often shifts, bringing soldiers face to face at many points, sparking a confrontation.
- Border infrastructure developments and differing perceptions of the LAC had triggered the clash.
- Following the clash, both sides engaged in de-escalation talks amid heightened tensions in bilateral ties.
- The PLA's 2020 incursions had severely restricted Indian Army patrols at key points in the **Depsang Bulge and CNN Junction**.
- However, the establishment of buffer zones in areas like **Galwan, Khugrang, Gogra-Hot Springs, and Pangong Tso** helped reduce tensions.

- **Key Points of the Deal**

- The two sides have agreed that patrolling in the following two areas will be carried out up to the old patrolling points along the LAC.
 - Depsang Plains in the north of Ladakh
 - Demchok in the south of Ladakh
- This means that Indian troops can patrol up to **patrolling point (PP) 10 to 13** in the **Depsang Plains**, and in **Charding Nullah of Demchok**.
- **Ongoing Disengagement Process:** The deal is part of a larger disengagement process that has seen successful pullbacks at several flashpoints, including **Pangong Tso, Gogra, and Hot Springs**. The current focus on **Depsang and Demchok** represents a willingness to address the more challenging aspects of the border dispute.

- **The Other Friction Points**

- Besides Galwan, there are at least four other friction points along the Line of Actual Control. These are all disputed areas where Indian and Chinese soldiers fought in the 1962 war.
- **Demchok:** Demchok is split by the LAC. India controls the western part. The eastern side is under the control of China, which also claims the western part. The dispute hinges on historical treaties and the precise alignment of the LAC along the Charding Nullah. Recent talks aim at disengagement.
- **Pangong:** About 50 per cent of Pangong Lake area is in Tibet (under Chinese control), 40 per cent in Ladakh and 10 per cent is disputed. Discrepancies in LAC perceptions lead to military standoffs and buffer zones, with ongoing construction and strategic positioning reflecting the tensions and claims by both nations.
- **Hot Springs:** Located near Gogra Post, the Hot Springs area is significant for India due to its strategic location which facilitates surveillance over LAC. India's control over this region enhances its defence posture, providing vantage points for monitoring movements in Aksai Chin, thus playing a crucial role in border security dynamics.
- **Depsang:** Depsang plains are critical for India due to their strategic access to the Daulat Beg Oldie (DBO) airstrip and the Darbuk-Shyok-DBO road. Control over Depsang prevents Chinese forces from threatening these vital logistics lines, making it essential for India's northern border defence and military mobility.

NEXT STEPS FOR RESOLUTION OF BORDER AREA ISSUES TO FOLLOW, SAYS DELHI

India, China reach agreement on patrolling along LAC, stage set for Modi and Xi meeting at BRICS Summit

Have arrived at arrangement leading to disengagement, says Foreign Secy; creates basis for pre-2020: Jaishankar

SHUBHARITROY
NEW DELHI, OCTOBER 21

MORE THAN four years after Chinese incursions in eastern Ladakh triggered a military standoff along the Line of Actual Control and sent bilateral ties south, India and China have reached an agreement on patrolling arrangements in the border areas, leading to disengagement in areas where 50,000 to 60,000 troops are stationed on either side.

At the venue of the BRICS summit in Kazan, Russia on Monday, the two-day summit starts Tuesday. **Source: PAGE 7**



Patrol rights in Depsang Plains, Demchok to be restored, will be closely coordinated

AMRITA NAYAN DUTTA
& DEEPTI MANI THAKUR
NEW DELHI, OCTOBER 21

HANDING-ON: CHINESE ARMY troops in eastern Ladakh. India and China have agreed to restore patrolling rights to each in the Depsang Plains and Demchok region — these are areas where the problems are called legacy issues, predating the 2020 Chinese incursions.



At the venue of the BRICS summit in Kazan, Russia on Monday, the two-day summit starts Tuesday. **Source: PAGE 7**

2. An approaching milestone in Constitutional Governance GS 2 (Governance)

- **Why in News:** With **November 26** marking the **75th anniversary of the adoption of the Constitution of India**, this milestone serves as an opportunity to reflect on the core values that have shaped India's constitutional governance and its impact on democratic culture.

- **Core Constitutional Values**

- **Respect for Democratic Institutions:** The Constitution was adopted in 1949 when life expectancy was around 32 years, highlighting significant social and economic progress. The consistent voter turnout, including 65.79% in the 2024 elections, reflects the public's respect for democratic institutions.

- **Smooth Transition of Power:** India's political landscape has seen diverse parties and leaders transition power seamlessly, emphasizing the electorate's understanding of governance. This commitment to peaceful power transitions, despite electoral rivalries, showcases a mature democratic tradition.

- **Protection of Rights and Freedoms:** The Constitution prioritizes fundamental rights, with courts established to safeguard individual freedoms. The framers, mindful of the state's potential overreach, enshrined these rights, which have been further reinforced over time, reflecting a deep commitment to individual liberties.

- **Federalism and the Role of Civil Society**

- **Federalism as Governance:** Recognizing India's diversity, the framers embedded federalism within the Constitution, allowing for autonomy and special privileges for different states. This framework promotes equity and inclusivity while facilitating the emergence of regional political parties.
- **Role of Media:** The Indian media, through its diverse representation, has played a crucial role in fostering democratic engagement. Despite challenges, the media's capacity to inform and engage the electorate has been instrumental in promoting transparency and accountability.
- **Celebrating Constitutional Governance:** The successful establishment of a national identity rooted in constitutional ideals demonstrates India's resilience against skepticism about its unity. This 75-year journey highlights the Constitution as a catalyst for social and political consciousness.

An approaching milestone in constitutional governance

November 26 this year will mark the commemoration of the 75th anniversary of the adoption of the Constitution of India. It is a milestone that needs to be celebrated by every stakeholder of Indian democracy. Constitutional governance in India is not merely a facet of the laws, rules and regulations that govern the establishment and the evolution of democratic institutions. It is also about permeating a deep sense of constitutional culture that has captured the collective consciousness of Indians across different cultures, faiths and beliefs.

Respect for institutions, power transition
As we move towards celebrating this Constitution Day, it is an opportune time to identify the core constitutional values that have shaped the constitutional culture of India. These five values have also witnessed the test of time.

First, people's respect for democratic institutions. The Constitution of India was adopted on November 26, 1949, a time when life expectancy in India was around 32 years. Today, it has progressed to around 70 years. This extraordinary improvement in the standards of living and the quality of life has contributed in a significant manner for the ordinary Indian to respect the role and the contribution of democratic institutions. The social and economic development of India is an example of the progressive implementation of public policy over the last several decades. There is a need for a nuanced understanding on why Indians continue to participate in such large and significant numbers in every election – local, State or national – notwithstanding the fact that they expect a better performance from their representatives. Since the first election in 1952, we have consistently witnessed nearly 60% of Indians participating in elections including in the 2024 general election where there was a 65.79% voter turnout. The respect for democracy and faith in democratic institutions in India is a core constitutional value that has witnessed the test of time.

Second, the smooth transition of elected governments. The seven decades have seen numerous elections across States and at the national level. India has seen elected representatives representing different political parties, with varying degrees of strength and weakness, within a State and at a national level. We have also seen political leaders of different ideological persuasions winning elections and holding positions of power and responsibility in the States and at the Centre. But if there is one thing that is unique and distinctive about India's democratic traditions, it is the deep commitment every political party attaches to this



C. Raj Kumar
the Vice-Chancellor of
O.P.J.S. Group of
Institutions

idea of smooth transitions of power at the end of elections. While elections are fought with high-voltage campaigns and at times, even divisive narratives, the electoral results are almost always a humbling experience – it is the people of India who win each election without any exception. The Indian electorate has, time and again, demonstrated to the world that its understanding of problems and challenges will shape our decisions relating to elections. The people of India have imbued this core constitutional value of participating in elections and enabling the smooth transition of power from one government to the other.

Upholding rights
Third, protection of rights and freedoms through courts. The Constitution is very forthright in recognizing the highest degree of importance being attached to the fundamental rights and the courts, which are institutions created under the Constitution to protect the rights of people. It is even more remarkable that the framers of the Constitution were people associated with the freedom movement and responsible for building the foundations of the Indian Republic. They struggled to fight against colonialism to help achieve India's freedom. While drafting the provisions relating to fundamental rights, the members of the Constituent Assembly were mindful of the power of the mighty state and its instrumentalities. They could have tilted towards the idea of a benevolent state, especially when almost the entire first Cabinet had people who were part of the freedom movement. However, their deep scepticism of the state apparatus and the fervent commitment towards protecting individual rights and freedoms reflected a far-sighted vision on their part. This vision of recognizing the role of the state, while being conscious of the fact that rights and freedoms are paramount, is a core constitutional value that has only been strengthened over the years.

Fourth, federalism as a facet of constitutional governance. The framers of the Constitution were mindful of the extraordinary diversity of the country, including its linguistic diversity and other forms of pluralism deeply embedded in our civil and political culture. The history and the tradition of every State of India also meant that they were conscious of protecting the unique identity, tradition and culture of the States and the people while forging a collective national identity. They created different forms of autonomy and special privileges for different States keeping in mind their unique histories and cultures. To efficaciously ameliorate the disparities that are prevalent among the people in certain regions of the nation, the Indian Constitution delineates a paradigm of special

dispensations, furthering the agenda of equity and inclusivity.
Over the last seven decades, the idea of federalism has further deepened at least at two levels: first, the rise of State-level political parties across India and their own contributions to the development of national political consciousness. This has, on several occasions, led to the establishment of coalition governments in the States and at the Centre. Second, the idea of federalism has also led to the passing of the 73rd and 74th Constitutional Amendments, which led to the establishment of panchayat raj institutions and nagarpalika.

The part played by media, civil society
Fifth, the role of the media and civil society in moulding faith in democracy. Much has been said and written about the Indian media. The Indian media is a diverse and heterogeneous institution with views and perspectives that are generated across India in different languages. Further, the transition of print media to broadcast and further to digital media and technology have democratised access to information and indeed the role of media. While there are fundamental challenges relating to the economic model of governance of media institutions, it is fair to say that media and civil society have contributed to the instilling of faith in Indian democracy. While we need to be critical of the challenges of the autonomy and the independence of media, it is equally important to recognize the values of transparency that have been part of the media culture. In the cacophony of an information explosion through various forms of media and the medium of communication, the Indian electorate has been enlightened to develop an informed degree of understanding of the role of the media and civil society.

We have every reason to celebrate 75 years of constitutional governance. The last British commander in chief of the Indian Army, General Claude Auchinleck had observed, "The 50th may try to set up a separate region. I think they probably will and that will be only a start of a general decentralization and break-up of the idea that India is a country, whereas it is a subcontinent as varied as Europe. The Punjab is as different from a Madras as a Scot is from an Italian. The British tried to consolidate it but achieved nothing permanent. No one can make a nation out of a continent of many nations. We proved many people wrong in not only forging a national identity of a nation that is built on constitutional ideals but we have also made the Constitution an instrument of galvanising social conscience and political consciousness."

3. The case for a nature restoration law in India GS 3 (Environment)

- **Why in News:** The urgent need for a comprehensive **Nature Restoration Law in India** is underscored by the alarming rate of land degradation affecting nearly 30% of the country's geographical area. The EU's recently enacted **Nature Restoration Law (NRL)** serves as a potential model for India to address its environmental crises.

- **Current Environmental Challenges**

- **Extent of Land Degradation:** India's **Desertification and Land Degradation Atlas** indicates that approximately 97.85 million hectares (29.7%) of land were degraded by 2018-19, a significant increase from 94.53 million hectares in 2003-05. States like Gujarat, Karnataka, Maharashtra, and Rajasthan account for 23.79% of this desertified land
- **Comparison with EU's NRL:** The EU's NRL mandates the restoration of at least 20% of its land and sea areas by 2030 and aims for full restoration by 2050. This law targets various ecosystems, reflecting a comprehensive approach that India could emulate.

- Existing Initiatives in India: India has initiated programs like the Green India Mission and the National Afforestation Programme to combat land degradation. However, the severity of the issue necessitates a legally binding framework similar to the EU's NRL to ensure sustainable ecosystem restoration.

The case for a nature restoration law in India

Proposed Framework for India's Law

- Restoration Targets:** A potential Nature Restoration Law for India could set a target to restore 20% of degraded land by 2030, ultimately aiming for complete restoration of ecosystems by 2050, encompassing forests, wetlands, and urban spaces.
- Focus on Key Ecosystems:** The law should prioritize the restoration of critical wetlands, agricultural biodiversity, and free-flowing rivers. For instance, targeting a 30% restoration of key wetlands like the Sundarbans by 2030 can enhance biodiversity and carbon sequestration.
- Economic and Social Benefits:** Implementing a restoration law could yield substantial economic returns, potentially generating up to \$10 trillion globally by 2030. In India, such efforts would improve agricultural productivity, water security, and create millions of jobs, particularly in rural areas.

The degradation of natural ecosystems is an urgent global issue, and India, with its vast geographical and ecological diversity, is no exception. With almost 30% of its total geographical area having land degradation, the need for India to adopt a comprehensive nature restoration law is more acute. The Nature Restoration Law (NRL), which was enacted by the European Union (EU), is an inspiring model from which India can draw points to tackle its growing environmental crises.

The NRL, adopted by the EU's Environmental Council on June 17, 2024, is a groundbreaking piece of legislation that aims to restore the health of Europe's ecosystems.

The regulation was endorsed by a majority of EU member-states, representing 66.07% of the EU population, marking a milestone in global environmental governance. The law mandates that at least 20% of the EU's land and sea areas must be restored by 2030, with the goal of having all ecosystems in need of restoration fully restored by 2050.

The NRL is part of the EU's Biodiversity Strategy for 2030 and the European Green Deal, and it seeks to reverse the alarming trend of biodiversity loss across Europe's habitats and ecosystems, from forests and agricultural lands to rivers and urban spaces, implementing specific measures such as the restoration of 25,000 kilometres of rivers into free-flowing rivers and the planting of three billion additional trees by 2030.

The environmental, economic case for India is compelling with similar, if not more severe, environmental challenges. According to the Indian Space Research Organisation (ISRO)'s Desertification and Land Degradation Atlas, nearly 97.85 million hectares (29.7%) of India's total geographical area is under land



Tabin A. Sinha
National Spokesperson,
Bharatiya Janata Party



Kanchan Sinha
Founder and Managing Director,
Earthhood

degradation in 2018-19, a sharp increase from 84.53 million hectares in 2004-05.

Desertification, in particular, is a growing concern, with 12.69 million hectares affected in 2018-19. The report highlights that land degradation is prevalent in key states such as Gujarat, Karnataka, Maharashtra and Rajasthan, which together form 23.79% of India's desertified land area.

India has already made considerable strides in addressing these issues through the successful implementation of the Green India Mission, the Pradhan Mantri Krishi Sinchayee Yojana, the Integrated Watershed Management Programme (which is the second largest watershed programme in the world) and the National Afforestation Programme. However, the scale of the problem demands a more comprehensive approach. Just as the EU's NRL sets legally binding targets for ecosystem restoration, India needs such a nature restoration law that mandates the restoration of its degraded landscapes, ensuring the long-term sustainability of its ecosystems.

What a law in India could look like: A Nature Restoration Law in India, inspired by the EU's model, could include the following:

First in the list is restoration targets. India should aim to restore 20% of its degraded land by 2030, with a goal of restoring all ecosystems by 2050. This includes forests, wetlands, rivers, agricultural lands, and urban green spaces.

Second is wetland restoration. Wetlands are less common in India, critical wetlands such as the Sundarbans and Chilika Lake support biodiversity and carbon sequestration. A law could target restoring 30% of degraded wetlands by 2030.

Third is biodiversity in agriculture. Agriculture dominates India's landscape. Promoting agroforestry and sustainable practices could

restore farmlands. Indicators such as the butterfly or bird index used in the EU, could track progress.

Fourth is river restoration. India could focus on restoring free-flowing rivers, beginning with major rivers such as the Ganga and Yamuna, addressing pollution and obstructions.

Fifth is urban green spaces. To combat urban degradation, India should ensure no net loss of green spaces, promoting urban forests in cities such as Bengaluru and Delhi, which face heat islands and declining air quality.

Economic and social benefits of restoration The benefits of such a law would extend beyond environmental restoration. According to the World Economic Forum, nature restoration could globally generate economic returns of up to \$10 trillion annually by 2030. In India, restoring degraded lands would enhance agricultural productivity, improve water security, and create millions of jobs, particularly in rural areas.

The law could also help India meet its Sustainable Development Goals (SDG) Goal 15, which calls for the sustainable management of forests and combating desertification.

Restoring ecosystems can also mitigate the effects of climate change, which exacerbates land degradation. Degraded land loses its capacity to store carbon, further contributing to global warming. By restoring its ecosystems, India can enhance its carbon sinks and meet its commitments under the Paris Agreement.

The EU's Nature Restoration Law sets an important precedent for countries worldwide. Given the alarming levels of land degradation and biodiversity loss in India, such a law in India would not only help India restore its degraded ecosystems but also contribute to its socio-economic development and climate resilience. The clock is ticking, and the time to act is now.

4. A New Accord for Assam GS 2 (Governance)

- Why in News:** The Supreme Court's recent ruling on **Section 6A of the Citizenship Act, 1955**, has upheld its constitutionality, igniting discussions on its implications for Assam's citizenship landscape. This decision reflects the complexities surrounding citizenship issues in Assam, particularly in light of historical demographic concerns and the Assam Accord.

Historical Background and Legislative Context

- Demographic Concerns in Assam:** Assam has a long-standing history of concern regarding demographic changes, particularly relating to illegal migration from Bangladesh. This issue sparked violent uprisings in the 1970s and 1980s, leading to the Assam Accord, which sought to address these fears by establishing a citizenship framework.
- Introduction of Section 6A:** Section 6A was introduced as part of the **Assam Accord** to provide citizenship to residents from 1950 to 1966 and a pathway for those from 1966 to 1971. Only migrants who entered after March 25, 1971, are deemed illegal. This provision aimed to create a localized citizenship regime to stabilize the region.
- Challenges to Section 6A:** Organizations in Assam have challenged Section 6A, arguing it discriminates by treating Assam differently from the rest of India and violates cultural rights under **Article 29**. They contend the cut-off date for citizenship should be uniform across the country.

Supreme Court Ruling and Its Implications

- Majority and Dissenting Opinions:** The Supreme Court, by a 4-1 majority, upheld **Section 6A's constitutionality**, viewing it as integral to the Assam Accord. The dissenting opinion noted the provision's unconstitutionality from the date of the judgment but did not affect existing citizenship claims.
- Consequences of Upholding Section 6A:** The Court's decision aims to avoid creating stateless individuals in Assam, recognizing that invalidating Section 6A could render many residents without citizenship. The ruling illustrates a balance between legal validity and the socio-political landscape.

Culture and society

Court verdict on citizenship law for Assam helps avoid fresh problems

In upholding Section 6A of the Citizenship Act, a provision introduced in 1985 to give effect to the core feature of the Assam Accord, the Supreme Court of India has helped preserve the existing legal regime for determining citizenship and identification of foreigners in Assam. Striking it down would have had the undesirable consequence of turning the clock back on the process laid down in statutory provisions and rules for the purpose. In its 4:1 decision, the Court has rightly seen the provision in the light of historical developments. While on one hand, Section 6A conferred deemed citizenship on all those who entered Assam from areas in erstwhile East Pakistan before January 1, 1966, it created, on the other, a system of registration for those who immigrated from that day to March 25, 1971, the day Pakistan began Operation Searchlight, a military drive to suppress the Bengali nationalist movement. The latter category of people had to be ordinarily residing in Assam and declared to be a foreigner by a tribunal before they could apply for registration as citizens. However, they would be ineligible to be on the electoral rolls for 10 years from the date of detection. Section 6A, as the Chief Justice of India, D.Y. Chandrachud, says in his concurring opinion, was aimed at finding a middle ground between a humanitarian approach towards the immigrant population in Assam and ensuring that large-scale immigration does not result in the loss of the cultural, economic and political rights of the Assam people.

The majority has rejected the notion that the provision is unconstitutional on the ground that it treats Assam differently from the rest of the country. It has noted that the citizenship provisions in the Constitution referred to 'citizenship at the commencement of the Constitution' and Parliament was not deprived of the power to introduce provisions on citizenship for a different category of people from a different date. In his main opinion, speaking for himself and two other judges, Justice Surya Kant has acknowledged the petitioners' 'demographic anxiety', but did not believe that the idea of fraternity in the Constitution was threatened by a mere change in demography. It is not a misplaced fear when he says accepting the argument that demographic change could lead to an erosion of the cultural rights of a section of society may open the floodgates for similar challenges to undermine inter-State migration in the guise of protecting indigenous culture. At a time when the exercise to finalise a National Register of Citizens for Assam is in limbo – 19 lakh people have been identified as non-citizens, but there have been no further developments – any decision invalidating Section 6A would have created fresh complications.

- ## 5. On Sanctions and Shadow fleets

- **What Are Sanctions?**

- [illegible]

- The global shipping industry is multifaceted, comprising various stakeholders, ship owners, and regulatory frameworks
- **Ownership and Flags:** The industry is dominated by Greek ownership (20% of the global fleet), with significant contributions from China and Japan. Ships are registered under flag states, which ideally indicate their country of origin.
- **Flags of Convenience (FoCs):** Nations like Panama and Liberia allow ship owners to register vessels under their flags to benefit from lower regulatory scrutiny and tax advantages, obscuring ownership.
- **Classification Societies:** These organizations certify ships for safety and environmental compliance, facilitating insurance coverage, including Protection and Indemnity (P&I) insurance for liabilities.

- **Complex Ownership Structures:** Many vessels operate under intricate ownership models, often involving shell companies that disguise the true ownership and origin of the ships.
- **Flag Switching:** Ships may change their flag to evade scrutiny, utilizing FoCs that do not comply with rigorous international maritime regulations.
- **Insurance Loopholes:** Ship owners can navigate around P&I insurance risks by contracting with European managers or registering under non-compliant jurisdictions.

- **Increased Registration:** Following the sanctions, many Russian vessels sought connections with Indian shipping firms, resulting in a rise in registrations with the Indian Register of Shipping (IRS). Critics argue this links India to the shadow fleet narrative.
- **Dubai as a Hub:** Many Russian vessels shifted operations to Dubai, where Indian entities have a significant presence, raising concerns about the laundering of Russian crude.

Can U.S. sanctions be enforced? Many agencies and shipping experts acknowledge that sanctions on Iran cannot be rigorously enforced because of the potential impact on world energy. The complex ways in which the shipping industry is structured, and because ownerships and origins of stakeholders are obscure and often based on vessel documentation.

More recently, the BBC reports that the U.S. had taken action only against some 35 U.K. companies so far. It has violated the price cap set by U.S. sanctions. Industry voices there stating strong action would be had by businesses.

- **IRS Defense:** The IRS has stated that its primary responsibility is ensuring vessel safety and that it provides classification services to ships under flags like Liberia and Cyprus, which do not raise immediate red flags.

6. Secularism in the Indian Constitution GS 2 (Constitution)

- **Why in News:** The Supreme Court of India recently reaffirmed that secularism is a fundamental aspect of the **Constitution's basic structure**. This affirmation comes amid ongoing debates surrounding the inclusion of the terms "**socialist**" and "**secular**" in the **Preamble**, particularly as a result of the **42nd Amendment** enacted during the **Emergency in 1976**.

Secularism is a core part of the Constitution: SC

The Hindu Bureau
NEW DELHI

The Supreme Court on Monday said secularism is an indelible and core part of the Basic Structure of the Constitution.

The court made the oral observation while hearing a batch of petitions filed by former Rajya Sabha member Subramanian Swamy and others challenging the inclusion of the words "socialist" and "secular" in the Preamble to the Constitution.

"This court has in a number of judgments held that secularism was always part of the Basic Structure of the Constitution. If one looks right to equality and

the word 'fraternity' used in the Constitution, there is a clear indication that secularism has been held as the core feature of the Constitution," a Bench of Justices Sanjay Khanna and Sanjay Kumar said.

Justice Khanna disagreed with the argument of the petitioners that the term "socialism" would curtail personal liberty and individualism.

"One should not take the meaning adopted in Western countries... Socialism can also mean that there should be equality of opportunity and the wealth of the country should be distributed equally," Justice Khanna remarked.



Advocate Ashwini Upadhyay, a petitioner, said he was not against the words "socialist, secular, and integrity" or their insertion in the Constitution but against the insertion of these words into the Preamble in 1976 and that too with a retrospective effect from November 26, 1949.

The Preamble was

amended in December 1976 by the Indira Gandhi government to introduce the words "socialist" and "secular". The phrase "unity of the nation" was replaced with "unity and integrity of the nation". The changes were made in the Preamble through the 42nd Constitution Amendment during the Emergency.

Originally, the text of the Preamble declared India as a "sovereign, democratic republic". The words "socialist" and "secular" were inserted between "sovereign" and "democratic".

The largest Bench in the history of the Supreme Court (13 judges) in the *Kesavananda Bharati* case

had held that the Preamble was an integral part of the Constitution, and was subject to the amending power of Parliament, provided the Basic Structure was not tinkered with.

Advocate Sriram Parakkat, appearing for CPI leader Binoy Viswam, said the 42nd amendment was indeed "infamous". It had after all tried to reduce the power of the Supreme Court and the High Courts.

"While subsequent amendments more or less restored the Constitution to what it was pre-1976, this change was made in the Preamble... that we are secular and socialist... was retained," Mr. Parakkat submitted.

- **What is Secularism?**
 - Secularism in the Indian context refers to the principle that the state treats all religions with equal respect and does not favor or discriminate against any religion.
 - It ensures that the government remains neutral in religious matters, allowing individuals the freedom to practice their religion while maintaining a clear separation between religion and state affairs.
 - **Constitutional Framework**
 - **Basic Structure Doctrine:** The doctrine established in the landmark **Kesavananda Bharati case (1973)** asserts that certain fundamental features of the Constitution, including secularism, cannot be altered or destroyed by any amendment by Parliament.
 - **Preamble to the Constitution:** Originally, the Preamble described India as a "sovereign, democratic republic."
 - **The 42nd Amendment in December 1976** added "**socialist**" and "**secular**," thus changing the description to a "**sovereign, socialist, secular, democratic republic**."
- **The 42nd Amendment and Its Controversy**
 - The controversy centres around the **42nd Constitutional Amendment**, passed in 1976 during the tenure of Prime Minister Indira Gandhi.
 - This amendment added the terms "socialist" and "secular" to the Preamble, altering the description of India from a "sovereign, democratic republic" to a "sovereign, socialist, secular, democratic republic."
 - **Petitions arguments:** Several petitions have been filed challenging the validity of the **42nd Amendment**:
 - Inclusion of "socialist" was unnecessary and contradicted the original vision of the Constitution's framers
 - Dr. B.R. Ambedkar's apprehensions regarding the term "socialism," suggesting that it could infringe on personal liberties
 - The original Preamble, adopted on November 26, 1949, should remain unchanged and cannot be retroactively amended.
- **Key Points from the Supreme Court**
 - During the hearings, the Supreme Court highlighted several important aspects:
 - **Secularism as Core Principle:** The Court noted that the concepts of equality and fraternity, along with fundamental rights outlined in Part III of the Constitution, inherently signify that secularism is a core feature.
 - **Preamble's Integrity:** The Supreme Court maintained that while the Preamble is amendable, any changes must not disrupt the Constitution's basic structure, which includes the principle of secularism.

7. Dana, Severe Cyclonic Storm GS 3 (Disaster Management)

- **Why in News:** The **India Meteorological Department (IMD)** has announced the development of a **low-pressure system** over the **East-central Bay of Bengal**, which is expected to intensify into a **severe cyclonic storm**, named "**Dana**".
- **The Naming of Cyclones**
 - The process of naming cyclones in the **North Indian Ocean** follows a structured convention initiated by the **WMO/ESCAP Panel on Tropical Cyclones**.
 - **Countries Involved**
 - **Original Group:** In 2000, a group comprising **Bangladesh, India, the Maldives, Myanmar, Oman, Pakistan, Sri Lanka, and Thailand** began naming cyclones.
 - **Expansion:** In 2018, the panel expanded to include **Iran, Qatar, Saudi Arabia, the UAE, and Yemen**.
 - **Total Names:** The IMD has a list of 169 cyclone names, with 13 suggestions from each of the 13 member countries.
 - **Naming Conventions:** Countries must adhere to specific guidelines when proposing names:
 - **Neutrality:** Names should not reference political figures, religions, or cultures.
 - **Sensitivity:** Names must not offend any global population group.
 - **Length:** Names should be short, easy to pronounce, and contain no more than eight letters.
 - **Originality:** A name cannot be repeated until all others on the list have been used.
 - **Pronunciation:** Each proposed name must include its pronunciation.
 - **Naming cyclones serves several important purposes:**
 - **Memorability:** Names are easier to remember than numbers or technical terms.
 - **Awareness:** Named storms facilitate public awareness and media reporting.
 - **Preparedness:** They enhance community preparedness by enabling rapid dissemination of warnings, especially during multiple cyclonic events.
- **What are Cyclones?**
 - A cyclone is a **large-scale system of air** that rotates around the centre of a **low-pressure area**.
 - The cyclone forms around the low-pressure area, called a **depression**, along a zone of cold and warm air exchange called the '**eye wall**'. The eye is the central and calmest part of the cyclone.
 - From this eye wall, long, arching cloud and rain systems called **rainbands spiral outwards**, which bring alternating periods of intense rain and calm spells during a cyclone.
 - The air circulates inward in an:
 - **anticlockwise direction in the Northern hemisphere**
 - **clockwise in the Southern hemisphere**
 - **Cyclones are classified as:**
 - **Extra tropical cyclones** (also called temperate cyclones): They occur outside of the tropic. They have "cold air at their core, and derive their energy from the release of potential energy when cold and warm air masses interact"
 - **Tropical cyclones:** Tropical cyclones are those which develop in the regions between the Tropics of Capricorn and Cancer
 - India is exposed to nearly **10 per cent of the world's tropical cyclones**. More cyclones occur in the **Bay of Bengal** than the **Arabian Sea** and the ratio is approximately 4:1.

Cyclone Dana likely to cross West Bengal, Odisha coasts

The Hindu Bureau
BHUBANESWAR

The India Meteorological Department (IMD) on Monday said the well-marked low-pressure area over the Bay of Bengal, which is likely to intensify into a severe cyclonic storm, would cross north Odisha and West Bengal coasts between Puri and Sagar Island during the night of Thursday and early morning on Friday.

The system will likely deepen into a depression on Tuesday and a cyclone on Wednesday.

The severe cyclonic storm Dana could record wind speed of 100-110 kmph gusting 120 kmph and cause heavy to very heavy rain in 11 districts of Odisha. Warning for fishermen has been extended to October 25.

A red alert has been issued for Mayurbhanj, Cuttack, Jajpur, Balasore, Bhadrak, Kendrapada, and Jagatsinghpur.

Chief Minister Mohan Charan Majhi chaired a high-level meeting to take stock of the preparedness. "We are ready to face the cyclone. All the disaster response teams have been put on readiness. Our focus is to ensure zero casualties," he said.

- **Worldwide terminology:** Cyclones are given many names in different regions of the world – They are known as:
 - **Typhoons** in the China Sea and Pacific Ocean
 - **Hurricanes** in the West Indian islands in the Caribbean Sea and Atlantic Ocean
 - **Tornados** in the Guinea lands of West Africa and southern USA
 - **Willy-willies** in north-western Australia
 - **Tropical cyclones** in the Indian Ocean

8. CBD COP16 GS 3 (Environment)

- **Why in News:** Representatives from governments around the world have been gathering in Cali, Colombia, for the 16th Conference of the Parties (COP16) to the Convention on Biological Diversity (CBD).
- **What is CBD COP16?**
 - **COP** stands for "Conference of the Parties," referring to regular meetings of countries that have ratified a specific UN convention.
 - In this instance, COP16 marks the sixteenth meeting of the Parties to the CBD, a treaty designed to promote sustainable development through biodiversity conservation.
 - The last biodiversity conference, COP15, took place in Montreal in December 2022, where the Kunming-Montreal Global Biodiversity Framework (GBF) was established. This framework outlines:
 - **Long-term Goal:** Achieving a world in harmony with nature by 2050.
 - **Short-term Targets:** Twenty-three specific goals aimed at halting and reversing biodiversity loss by 2030
 - **Convention on Biological Diversity (CBD)**
 - The CBD, launched during the 1992 Earth Summit in Rio de Janeiro, is one of the most widely ratified UN conventions.
 - It aims to conserve biological diversity, ensure sustainable use of its components, and promote fair sharing of genetic resource benefits.
 - Parties to the CBD convene every two years to review progress and set new priorities.

World lags on 2030 nature goals as COP16 talks begin

Reuters

The world in 2022 reached its most ambitious deal ever to halt the destruction of nature by 2030 and, two years later, countries are already behind on meeting their goals.

As nearly 200 nations meet on Monday for a two-week U.N. biodiversity summit, experts in Cali, Colombia, they will be under pressure to prove their support for the goals laid out in the Kunming-Montreal Global Biodiversity Framework agreement.

A top concern for countries and companies is how to pay for conservation, with the COP16 talks aiming to develop new initiatives that could generate revenues for nature.

"We have a problem here," said Gavin Edwards, director of the nonprofit Nature Finance. "COP16 is an opportunity to re-emerge and remind everybody of their commitments two years ago and start to course correct if we're going to get anywhere close to 2030 targets being achieved."

The rate of nature destruction through activities like logging or overfishing has not let up, while governments miss deadlines on their biodiversity action plans and funding for conservation is billions of dollars away from meeting a 2030 goal.

The summit in Colombia, marking the 30th meeting of nations that signed the original 1992 Convention on Biodiversity, is set to be the largest biodiversity summit to date, with some 25,000 delegates registered to participate as well as a large exhibition area open to the public.

Pressure can push countries towards bolder conservation actions towards the sea.

The clearest sign of lagging efforts is that five of the most countries have yet to submit national conservation plans, known officially as National Biodiversity Strategies and Action Plans (NBSAPs), though they had agreed to do so by the start of COP16.

As of October 18, 31 out of 195 countries had filed plans with the U.N. biodiversity secretariat.

Richer nations have been quicker to file, including many European nations, Australia, Japan, China, South Korea, and Canada. The United States, despite the talks but has never ratified the Convention on Biodiversity, so is not obligated to submit a plan.

Another 73 countries as of October 18 had agreed to only file a less ambitious submission that sets out their national targets without details of how they would be achieved.

With as few plans filed, experts will likely struggle to gauge progress in meeting the agreement's headline "30 by 30" goal of protecting 30% of the land and sea by 2030.

Colombia's Environment Minister, Sussana Muhamad, who also serves as COP16's president, said the summit must also address why so many efforts are late.

"It could be that the funds are not enough, for example, to be able to produce the plans," she said.

Some countries have had a harder time coming up with the money needed to develop national biodiversity plans. World Wildlife Fund for Nature advocacy chief Bernadette Fischer Hooper said:

9. SC's Stance on the Uttar Pradesh Madrasa Education Act GS 2 (Governance)

- **Why in News:** The Supreme Court of India addressed the constitutional validity of the **Uttar Pradesh Board of Madrasa Education Act, 2004**, which regulates madrasas in the state. The Allahabad High Court had previously declared this Act unconstitutional, asserting that it **violated the principles of secularism**, affecting approximately 17 lakh students enrolled in around 16,000 madrasas.
- **Background of the Case**
 - The Uttar Pradesh Madrasa Education Act, 2004 was designed to regulate the functioning of madrasas, ensuring quality education and governance within these institutions.
 - **Controversy:** The Allahabad High Court's decision to strike down the Act stemmed from the assertion that it infringed upon the secular fabric of the state by imposing regulations on minority-run educational institutions.
 - **High Court's Judgment:** The Allahabad High Court ruled that the law violated:
 - **Secularism:** As enshrined in the Constitution.
 - **Article 28:** Prohibiting religious instruction in state-funded educational institutions.

- The court ordered the transfer of madrasa students to regular schools, raising concerns about the educational rights of minority communities.

• Supreme Court Observations

- The laws regulating institutions run by religious or linguistic minorities cannot inherently be deemed as **violations of secularism**. The mere fact of regulation does not breach the secular principle.
- Such regulations are commonplace and necessary for the better administration of educational entities.
- **State's Role in Education:** It is within a **state's interests to legislate for the improvement of minority-run institutions**.
- **Article 30 of the Constitution** does provide for a community to promote its religious education; only if the institution receives state funds such religious instructions or education cannot be done under Article 28.
- However, **Article 28(2)** also carves an exception to that by providing that such a prohibition does not apply to an educational institution which is administered by the State but has been established under any endowment or trust which requires that religious instruction shall be imparted in such institution.

GOVT-AIDED MADRASAS SC stays NCPCR move to close madrasas over RTE violations

Halts consequent directions by Centre, UP, Tripura: 'Shall not be acted upon'

**EXPRESS NEWS SERVICE
NEW DELHI, OCTOBER 2**
The Supreme Court on Monday stayed the order of the National Commission for the Protection of Child Rights (NCPCR) recommending the closure of government-aided madrasas for not complying with the Right to Education (RTE) Act. The order, which had directed the Centre, Uttar Pradesh and Tripura to "shall not be acted upon", was passed by a 3-2 majority. The majority was headed by Chief Justice of India D.Y. Chandrachud.

The government had sought to close down madrasas in Uttar Pradesh and Tripura in June 2023, citing RTE violations. The NCPCR had recommended the closure of these institutions.

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10. Z-Morh project in Kashmir GS 3 (Infrastructure)

• Why in News:

- On October 20, suspected militants attacked workers of APCO Infratech, an infrastructure company constructing the Z-Morh tunnel on the Srinagar-Sonamarg highway in Jammu and Kashmir.
- Seven workers were killed in this attack, marking the first militant assault on a key infrastructure project in the region. Previously, militants had not targeted such projects in Jammu and Kashmir.

• Z-Morh tunnel

○ About

- The Z-Morh tunnel is a 6.4-kilometer tunnel connecting the Sonamarg health resort with Kangan town in central Kashmir's Ganderbal district.
- It is located near Gagangir village, just ahead of Sonamarg, and **will ensure all-weather connectivity to the popular tourist destination** on the Srinagar-Leh highway.
- The tunnel gets its name from the Z-shaped road stretch at the construction site.

○ Commencement of the project

- The Z-Morh tunnel project, originally conceived by the Border Roads Organisation (BRO) in 2012, was initially awarded to Tunnelway Ltd.
- Later, the National Highways & Infrastructure Development Corporation Limited (NHIDCL) took over the project.
- Although expected to be completed by August 2023, the project faced delays.
- A soft opening took place in February 2024, but the official inauguration was postponed due to the Model Code of Conduct in place for the Jammu and Kashmir Assembly elections.

○ Need for the tunnel

- The stretch where the tunnel is under construction is situated at an altitude of over 8,500 feet, and is prone to snow avalanches in the winter.
- The road to Sonamarg as such remains closed for most part of the winter.

What is Z-Morh tunnel? Why is it strategically important?

DASHMARTI/MASOOD & MAN AMAN SINGH CHINA
SRINAGAR, JAMMU AND KASHMIR, OCTOBER 2

What is the Z-Morh tunnel?
The 6.4-kilometre tunnel connects the town of Kangan in the Ganderbal district to the health resort of Sonamarg. It is a key infrastructure project on the Srinagar-Leh highway, which is a major route for tourists and pilgrims. The tunnel is strategically important as it will ensure all-weather connectivity between the two towns, which is currently cut off for much of the winter. The project is being funded by the Border Roads Organisation (BRO) and is being constructed by the National Highways & Infrastructure Development Corporation Limited (NHIDCL).

Why is it strategically important?
The tunnel is located on a high-altitude stretch of the Srinagar-Leh highway, which is a major route for tourists and pilgrims. It is a key infrastructure project on the Srinagar-Leh highway, which is a major route for tourists and pilgrims. The tunnel is strategically important as it will ensure all-weather connectivity between the two towns, which is currently cut off for much of the winter. The project is being funded by the Border Roads Organisation (BRO) and is being constructed by the National Highways & Infrastructure Development Corporation Limited (NHIDCL).

What is the importance of the tunnel?
The tunnel is a key infrastructure project on the Srinagar-Leh highway, which is a major route for tourists and pilgrims. It is a key infrastructure project on the Srinagar-Leh highway, which is a major route for tourists and pilgrims. The tunnel is strategically important as it will ensure all-weather connectivity between the two towns, which is currently cut off for much of the winter. The project is being funded by the Border Roads Organisation (BRO) and is being constructed by the National Highways & Infrastructure Development Corporation Limited (NHIDCL).

- **Strategic importance of the Z-Morh tunnel**
 - The Z-Morh tunnel, part of the larger Zojila tunnel project, aims to ensure year-round connectivity from Srinagar to Ladakh.
 - The **Zojila tunnel, connecting Sonamarg to Drass in Ladakh**, is under construction and expected to be completed by December 2026.
 - While the Z-Morh tunnel will provide all-weather access to the Sonamarg health resort, it is crucial for **maintaining quick military access to Ladakh**.
 - The Z-Morh tunnel is key to enabling all-weather road connectivity between Srinagar, Drass, Kargil, and Leh, reducing dependence on air maintenance for forward military positions.
 - This will improve troop and supply transport, lower costs, and extend the life of aircraft used by the Indian Air Force.
 - The project is vital for Indian defense forces deployed in Siachen and Eastern Ladakh, where tensions with Pakistan and China persist.
- **Revival of Terrorism in Jammu & Kashmir – analysis**
 - **Recent terror attack on infra project in J&K and the exposing of vulnerabilities**
 - The terror attack on workers of APCO Infratech, constructing the Z-Morh tunnel, marks a significant event in Jammu & Kashmir.
 - It reflects the revival of terrorism and points towards a broader strategy aimed at exposing vulnerabilities in the region.
 - The incident suggests a deliberate effort by **Pakistan's deep state to derail peace and stability**, especially after the peaceful elections and installation of a democratic government in Srinagar.
 - Deep state is an alleged secret network of especially nonelected government officials and sometimes private entities (as in the financial services and defense industries) operating extralegally to influence and enact government policy
 - **Pakistan's Deep State and its Role**
 - The Pakistani deep state appears determined to re-establish its relevance in J&K by instigating violent events.
 - Their goal is to obstruct India's process of stabilizing J&K, particularly after the abrogation of Article 370.
 - A strategic terror event like this attack is seen as a way to prevent peace dividends from taking root and ensure continued instability.
 - **Targeting Peripheral Areas and Infrastructure Projects**
 - While traditional urban areas like Srinagar, Anantnag, and Baramulla remain heavily secured, the attackers have shifted focus to peripheral regions with low security.
 - The Z-Morh tunnel, a flagship infrastructure project, requires a large workforce and specialized expertise.
 - The attack may indicate a larger threat to infrastructure projects in J&K's peripheral regions, such as the Kishanganga project and railway projects in Banihal and Qazigund.
 - **Possible Chinese angle**
 - The People's Anti-Fascist Front (PAFF), a Pakistani terror group, issued a statement praising The Resistance Front (TRF), an offshoot of Lashkar-e-Taiba, for the recent attack in Jammu and Kashmir that killed seven civilians.
 - PAFF described the attack as "strategic" and claimed it was meant to disrupt Indian military deployments toward the eastern border, also citing "Chinese friends" as part of their justification.
 - While China and Pakistan have known strategic ties, there is no evidence of Beijing's involvement so far
 - **Broader Pattern of Unusual Activities**
 - **The attack could be part of a wider scheme targeting India's emerging strategic confidence.**
 - Recent events such as bomb hoaxes, strange blasts, and diplomatic pressure over transnational issues appear connected, signaling a broader attempt to put India on the defensive.

Conclusion

- The proxy war in J&K is far from over. While the frequency of violence has decreased, complacency must be avoided, and efforts should focus on combating terror networks, financing, and drug mafias to sustain stability in the region.

11. How South India Deals with its Aging Population?

GS 1 (Social Geography)

Why in News:

- In an unexpected move, **Andhra Pradesh Chief Minister N. Chandrababu Naidu** announced that his government is working on a law to incentivize families to have more children.
- His concerns arise from the state's **declining young population**, with fertility rates below the **replacement level**.
- According to the CM, having fewer than two children is leading to a rapid decline in the younger population, and this could have long-term implications for the state.

Context & Concerns of Southern States:

- CM's remarks are part of a broader discussion regarding population trends in **Southern India**.
- Southern states, like **Tamil Nadu, Kerala, and Andhra Pradesh**, have successfully brought down their **fertility rates** over the years
- This success has contributed to an **aging population**, creating concerns about the future representation of these states in the **Indian Parliament**.
- Tamil Nadu Chief Minister **M.K. Stalin** even raised concerns about the potential reduction of South India's share in parliamentary seats due to low population growth.

India's Aging Population and Fertility Trends:

- With the **2021 Census** delayed, the most recent data on population projections come from a **2020 report** by the Union Ministry of Health and Family Welfare.
- The report highlights several key findings:
 - Aging Population:**
 - Across India, the percentage of people aged **60+** is expected to increase significantly.
 - However, this trend is more pronounced in Southern states, which achieved **low fertility rates** earlier than their Northern counterparts.
 - For example, **Uttar Pradesh** is projected to reach the replacement level of fertility (2.1 children per woman) only by 2025, more than two decades after Andhra Pradesh.
 - Population Growth:**
 - Between **2011 and 2036**, India's population is expected to grow by **31.1 crore** people.
 - Half of this growth will come from just five states: **Bihar, Uttar Pradesh, Maharashtra, West Bengal, and Madhya Pradesh**.
 - On the other hand, the five Southern states (**AP, Karnataka, Kerala, Telangana, and Tamil Nadu**) will contribute only **2.9 crore** to the total population increase during the same period.
 - Older Population Doubling:**
 - The number of elderly persons (aged 60+) is expected to more than double, from **10 crore in 2011 to 23 crore in 2036**.
 - In **Kerala**, for example, nearly **1 in 4 people** will be over 60 by 2036. In contrast, **Uttar Pradesh** is projected to have a younger population, with only **12%** of its people in the 60+ bracket by 2036.

The population question

Why have concerns been raised over aging populations in South India? Can people be incentivised to have more babies to impact this trend? What role can internal migration play?

UNIT MISRA
NEW DELHI, OCTOBER 21

ANDHRA PRADESH Chief Minister N. Chandrababu Naidu has said his government is working on a law to incentivise residents of the state to have more children. "We are already in deficit. Having less than two children leads to the rapid decline of the young population," he said.

Earlier, when asked by The Indian Express about concerns among Southern states that their smaller populations might impact their representation in Parliament after the delimitation of constituencies, Naidu had said: "South India, with a lower fertility rate, is already facing the aging issue, and it will gradually impact North India as well."

On Monday, Tamil Nadu Chief Minister M. K. Stalin asked about the potential reduction of South India's share in parliamentary seats due to lower population growth rates: "Why not aim for 16 children?"

What do data say on aging and overall population size?

With Census 2021 delayed, the most recent population projections available are in a 2020 report of a technical group within the Union Ministry of Health and Family Welfare.

As the chart shows, India's population is projected to age with each passing year. The proportion (percentage) of people in the 60+ bracket will rise across the board — even though the increase in the Northern states will be smaller than in the South. This is because most Southern states transitioned to a lower fertility rate sooner than the Northern states. For example, Uttar Pradesh is projected to achieve the Replacement Level of Fertility only next year — that is more than two decades after Andhra Pradesh.

Here's what else the report projected:

- In the 25 years from 2011 and 2036, India's population will increase by 31.1 crore. Almost half — 17 crore — will be added in the states: Bihar, UP, Maharashtra, West Bengal, and Madhya Pradesh. As much as 85% of the total population increase during 2011-36 is expected to occur in UP.
- The contribution of the five Southern states — AP, Karnataka, Kerala, Telangana, and Tamil Nadu — to the total increase in population during 2011-2036 is expected to be only 2.9 crore, or 9%.
- With declining fertility and increasing

life expectancy the number of older persons in the population is expected to more than double from 10 crore in 2011 to 23 crore in 2036. Their share in the population rising from 8.4% to 14.9% during this period.

In Kerala, where lower fertility and mortality rates were achieved much sooner than other states, the proportion of persons aged 60 years and older will increase from 13% in 2011 to 23% in 2036 — or almost 1 in 4 individuals. The population of UP by contrast, is expected to be comparatively younger — the share of 60+ individuals in the state population is expected to increase from 7% in 2011 to 12% in 2036.

Why is an aging population, and a relatively smaller population, a concern?

No aging population (which Naidu spoke of) and a smaller population (that Stalin referred to) are two separate concerns. Typically, if two-thirds of the total population is in the working-age bracket it implies a "dividend" — because the dependency ratio (that is, the percentage of population that is not earning and dependent on those who are) is less than 50%.

Dependency is of two kinds: those below the age of 15, and those above the age of 60. A high percentage of aging population does imply that the state may have to spend more on taking care of this growing population.

The issue of the total population of a state being lower compared to other states is different. This issue has come into sharp focus in public discussions on electoral delimitation — where fears have been expressed that Southern states could end up getting penalised by way of fewer seats in Lok Sabha for having made the demographic transition before the North (and especially the so-called BIMARU states).

So, do government policies to boost fertility, as Naidu mentioned, work?

Naidu referred to some countries — such as Japan, China, and countries in Europe — that are also struggling with aging populations. But there is no real evidence that people who have reached a certain level of prosperity and education can be incentivised to have more babies.

Academics such as social demographer Ronald Desai, Distinguished University Professor Emerita at the University of Maryland, and P. M. Kulkarni and Deepak Mishra of IITM, are unanimous that pro-natalist policies have had very little success.

"Virtually nowhere in the world — Japan, China, Korea, France etc. — have pro-natalist policies worked. The only place where such policies had some impact to the extent that they did not allow the fertility rate to plummet to very low levels were in Scandinavian countries. Here the policies were more in the shape of family support, childcare support, gender equality, paternity leaves etc.," Desai said.

However, she stressed that even giving financial support doesn't do enough to encourage families to have more babies.

Why do statements like the ones made by Naidu matter?

These statements demonstrate the stark turnaround in the stand taken by politicians, especially from the Southern states, on the population question.

Roughly five decades ago, the main concern facing India was rapid population growth, fuelled by high levels of fertility (births per woman). The situation was once deemed so grim that many wondered if India would even have enough food to feed its teeming millions.

Over the decades, however, India has been able to arrest the pace of population growth — an achievement that has been led by several Southern states. Andhra Pradesh achieved the Replacement Level of Fertility — that is, an average of 2.1 children per woman — in 2004, making it the fifth Indian state to do so after Kerala (1981), Tamil Nadu (2000), Himachal Pradesh (2002), and West Bengal (2003). Andhra Pradesh used to have a law that barred people from contesting in local polls if they had more than two children. Naidu has repealed it.

However, while individual states are witnessing considerably lower levels of fertility than in the past, India's inherent population momentum has meant that it is now the most populous country on the planet.

If incentives don't work, what is the way forward to address concerns about population?

The simplest solution is (internal) migration. Desai said.

There are three contributors to the total population: fertility, mortality, and migration. Both Desai and Kulkarni said migration can even out the imbalance caused by the mismatch in the pace of the demographic transition between North and South India.

Of course, such migration is already underway. "What's more, the Southern states will get people in the working age," Desai said. In other words, destination states don't have to spend on nurturing a young population, their education, etc.; they can straightaway benefit from the working-age migrant population.

This is the model that the United States has employed over the decades — its immigrants, their economic output and their fertility, that has helped sustain America's economic dominance over the world.

Both Kulkarni and Mishra underscored that rather than having more children, the concern for India should be to boost the economic productivity of its labour force, and to ensure that the benefits of the ongoing demographic dividend are captured fully.

LONGER VERSION ON
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- **Why is an Aging Population a Concern?**

- An aging population and smaller overall population are two distinct issues.
- An aging population raises concerns about the **dependency ratio**—the percentage of the population that is not working (those below 15 and above 60).
- A high dependency ratio means that a larger portion of the population relies on the working-age group for economic support.
- As a result, the state may have to invest more in **healthcare** and **social security** for the elderly.
- On the other hand, a **smaller population** compared to other states could impact political representation in the **Lok Sabha** (House of the People).
- Southern states, which achieved demographic transitions earlier, fear they could be penalized during **electoral delimitation**, losing seats in Parliament to Northern states like **Bihar, Uttar Pradesh, and Madhya Pradesh**, where population growth continues to be higher.

- **Do Pro-Natalist Policies Work?**

- CM cited examples from countries like **Japan, China, and Europe**, where governments have attempted to boost fertility rates to counter aging populations.
- However, **experts** argue that **pro-natalist policies**—policies encouraging families to have more children—have had limited success.
- According to these experts, these policies generally fail, particularly in societies that have achieved a certain level of prosperity and education.
- While **Scandinavian countries** have managed to stabilize fertility rates to some extent through **family support systems, childcare services, and gender equality measures**, countries like **Japan and China** have not seen significant success.
- Even offering financial incentives is not enough to encourage families to have more children, as shown in the case of countries like **France and South Korea**.

- **Why CM Naidu's Comments Matter?**

- CM's remarks mark a **significant shift** in the political discourse surrounding population. Several decades ago, India faced concerns about **overpopulation**, with high fertility rates leading to rapid population growth.
- Back then, politicians and policymakers were focused on controlling population growth to avoid potential crises.
- Southern states, like **Andhra Pradesh**, played a crucial role in achieving **Replacement Level of Fertility**.
- Andhra Pradesh, for instance, reached the fertility rate of 2.1 children per woman in 2004.
- In fact, Andhra Pradesh once had a law that barred individuals with more than two children from contesting local elections—a law that the CM repealed.
- However, with declining fertility rates and India now being the **world's most populous country**, the political conversation is evolving.
- The challenge now is **balancing population control** with ensuring there are enough young people to support economic growth.

- **What is the Way Forward?**

- While **pro-natalist policies** have proven largely ineffective, experts suggest that **migration** could help address demographic imbalances. **Internal migration from Northern to Southern states could alleviate the issue of a shrinking workforce in the South.**
- Southern states can benefit from this by absorbing migrants who are already of working age, thus bypassing the costs associated with raising and educating a young population.
- This is similar to the model employed by the **United States**, where immigration has helped sustain the country's **economic dominance** by providing a steady flow of working-age individuals.
- Economists also argue that India's focus should be on **improving the productivity** of its labor force, rather than simply increasing the population.
- By ensuring that India capitalizes on its ongoing **demographic dividend**—a large share of the population being of working age—the country can maximize economic growth.

- **Conclusion:**

- As **Andhra Pradesh** considers incentivizing larger families, the broader debate around **fertility rates, aging populations, and political representation** comes to the fore.
- While the state faces real challenges related to its declining young population, global evidence suggests that **pro-natalist policies** may not be the answer.
- Instead, a combination of **migration, labor productivity improvements**, and a focus on the **demographic dividend** could help balance India's population and economic needs.

12. Caenorhabditis elegans GS 3 (Science and Tech)

- **Why in News:** Recently, while accepting the Nobel Prize in Physiology or Medicine this year, molecular biologist Gary Ruvkun spent a few minutes lauding his experimental subject: a tiny worm named *Caenorhabditis elegans*.
- **About *Caenorhabditis elegans*:**
 - It is a **nematode worm** which is a small, relatively simple, and **precisely structured organism**.
 - *Elegans* grows within 3-5 days from a fertilised egg to a millimetre-long adult, and it has informed profound insights into the human body, as well as biology.
 - It is widely used in research to understand **neuronal and molecular biology**.
 - It was the first multicellular organism to have **its full genome sequenced** and neural wiring mapped.
 - It has two sexes—a **hermaphrodite and a male**.
 - The hermaphrodite can be viewed most simply as a female that produces a limited number of sperm: she can reproduce **either by self-fertilization**, using **her own sperm**, or by cross-fertilization after transfer of male sperm by mating.
 - Self-fertilization allows a single heterozygous worm to produce homozygous progeny.
- **What are Nematodes?**
 - These are any worm of the **phylum Nematoda**.
 - These are among the most abundant animals on Earth.
 - They occur as parasites in animals and plants or as free-living forms in soil, fresh water, marine environments, and even such unusual places as vinegar, beer malts, and water-filled cracks deep within Earth's crust.
 - **Features**
 - **Nematodes are bilaterally symmetrical**, elongate, and usually tapered at both ends.
 - Some species **possess a pseudocoel**, a fluid-filled body cavity between the digestive tract and the body wall.

C. ELEGANS

Simple microscopic worms, studying which has won scientists four Nobel Prizes so far

WHILE ACCEPTING the Nobel Prize in Physiology or Medicine this year, molecular biologist Gary Ruvkun spent a few minutes lauding his experimental subject: a tiny worm named *Caenorhabditis elegans*. This is not this worm's first brush with international stardom nor is it the first time *C. elegans* has been thanked for aiding award-winning work. Ruvkun's award was actually the fourth Nobel Prize resulting from *C. elegans* research, cementing the lowly soil worm's outsize role in scientific discovery.


Four Nobels

The 1-millimeter nematode has helped scientists understand how healthy cells are instructed to kill themselves and how the process goes awry in AIDS, strokes and degenerative diseases. (That work was the subject of the 2002 Nobel Prize in physiology or medicine.) Self-proclaimed "worm people" were recognised by the Nobel committee in 2006 for discovering gene silencing, which became the basis for an entirely new class of drugs. Two years later, the chemistry prize went to scientists who used nematodes to help invent cellular "lanterns" that allowed biologists to see the inner workings of a cell.

For each prize, a laureate made sure to thank the worm for its contributions, though perhaps the most famous nod came from Sydney Brenner, who won the first "worm Nobel." "Without doubt, the fourth winner of the Nobel Prize this year is *Caenorhabditis elegans*," he said in his lecture in Stockholm.

'Experimental dream'

One of the *C. elegans*' virtues is its simplicity, which allows scientists to test hypotheses about fundamental biological concepts in a model that is easy to understand. The nematodes have just 959 cells—a remarkably manageable number, compared with our trillions of cells—each of which scientists have named and charted



The worm *C. elegans* with embryos attached to its body. *The NYT*

from fertilisation to death. The destiny of each cell is easy to map, since the worms become translucent under the light of a microscope and cycle through all developmental stages in about three days.

The nematode was the first animal to have its genome entirely deciphered—in 1998, years before scientists were able to do the same for flies and mice. The worm is inexpensive, easy to store and entirely self-sufficient when it comes to reproduction; female *C. elegans* have functional sperm that allow them to inseminate themselves.

"It's an experimental dream," said Judith Kimble, a nematode researcher at the University of Wisconsin, Madison.

Bonding over worms

Kimble attributes much of the research success to the fact that worm-bonded scientists tend to share their resources and cooperate. Ruvkun, of the Harvard Medical School, and his co-winner, Victor Ambros, a professor of molecular medicine at UMass Chan Medical School, shared their findings with each other, allowing them to piece together the mechanics of microRNA.

The *C. elegans* research community comes together every other year at the International Worm Convention.

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MCQ Current Affairs
22nd Oct, 2024

1. Which one of the following is the best description of 'Crepidium assamicum', that was in the news recently?

- a) A fossilized plant species.
- b) A rare species of medicinal herb
- c) A newly discovered species of orchid
- d) A newly discovered species of freshwater fish

2. Consider the following statements regarding Nature Restoration Law (NRL), recently seen in the news:

- A. It is a European Union (EU) law to tackle the triple crises of climate change, biodiversity loss, and environmental degradation.
- B. It sets binding targets on member states to restore degraded ecosystems.

Which of the statements given above is/are correct?

- a) A only
- b) B only
- c) A and B
- d) Neither of two

3. Consider the following statements regarding the Bioluminescence:

- A. It is a natural phenomenon produced primarily by microscopic plankton called dinoflagellates.
- B. It occurs when the luciferase enzyme reacts with the luciferin compound in the presence of oxygen.

Which of the statements given above is/are correct?

- a) A only
- b) B only
- c) A and B
- d) Neither of two

4. *Caenorhabditis elegans*, recently in news, is a:

- a) Nematode
- b) Fungus
- c) Bacteria
- d) Invasive plant

5. Consider the following statements regarding Nilgiri tit Butterfly:

- A. It is found in the Kalakkad Mundanthurai Tiger Reserve.
- B. It is classified under Schedule II of the Wildlife Protection Act, 1972.

Which of the statements given above is/are correct?

- a) A only
- b) B only
- c) A and B
- d) Neither of two

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1. c
2. c
3. c
4. a
5. c

