# Topics - MINDS MAPS included (Daily current affairs )-- 22nd October 2024

SAURABH PANDEY

CS PROSTRICTOR

- Cyclone Dana:
- Supreme Court's Stance on Secularism and Socialism
- COP16 Biodiversity Summit
- James Webb Telescope
- 75th Anniversary of the Indian Constitution
- Advance Reservation Policy Update
- Ecosystem Restoration and Land Degradation
- Shadow Fleet and Global Shipping Dynamics
- High-Performance Buildings:
- Yasmina Lake
- Mains





## Target Mains -2025/26 -

Q "Shadow fleeting is a new challenge india has to face in Managing International trade". Examine

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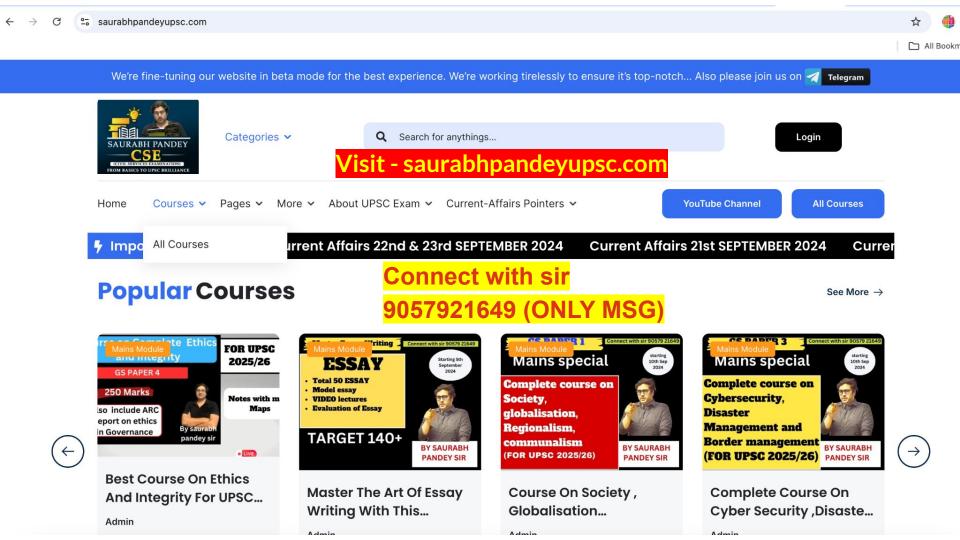


BY SAURABH PANDEY SIR FOR UPSC 2025/26

# NEW BATCH LAUNCHED

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D) Ladhak

Q2. Consider the following statements in context of the Gold Production. (The Hindu)

1) Gold is a precious metal with
the atomic number 69 and the
Latin name 'aurum', symbolized as
Au on the periodic table
2) Around 10% of gold produced
globally is utilized in various
industries due to its desirable
properties, including being
corrosion-resistant and a good
conductor of electricity

4) Each Nobel Prize awarded from is a featured medal made of electrum, an alloy of gold and silver, plated with 24-carat gold.

3) While South Africa is the largest

producer of gold, China holds the

second position.

Q3. This is a wildlife sanctuary situated on the northern boundary of Madhya Pradesh and the adjoining Rajasthan state in India. It was notified in 1974. The Chambal River passes through the sanctuary dividing it into two parts. It is in the Khathiar-Gir dry deciduous forests ecoregion. Which of the following Wildlife Protected Area is

- Wildlife Protected Area i described above. (DTE) A) Kuno National Park
- B) Gandhi Sagar Wildlife Sanctuary.
- C) Sailana Wildlife Sanctuary
  D) Madhav National Park

Q4. Consider the following statements. (DTE)

Statement I: Inclusive institutions were often introduced in countries that were poor when they were

#### Riding the waves





**Brewing storm:** Fishermen off the Visakhapatnam coast on Monday. They have been asked not to venture into the sea since cyclonic storm Dana is expected to make a landfall in Odisha on Thursday. V. RAJU (RELATED REPORT ON PAGE 6)

#### **Topic**→ **Cyclone Dana: A Developing Weather Phenomenon**



Low-Pressure System: The India Meteorological Department (IMD) has identified a low-pressure system over the East-central Bay of Bengal, which is expected to intensify.

Cyclone Formation: This system is projected to evolve into a severe cyclonic storm named "Dana"

Landfall Timeline: Cyclone Dana is anticipated to make landfall in north Odisha and West Bengal

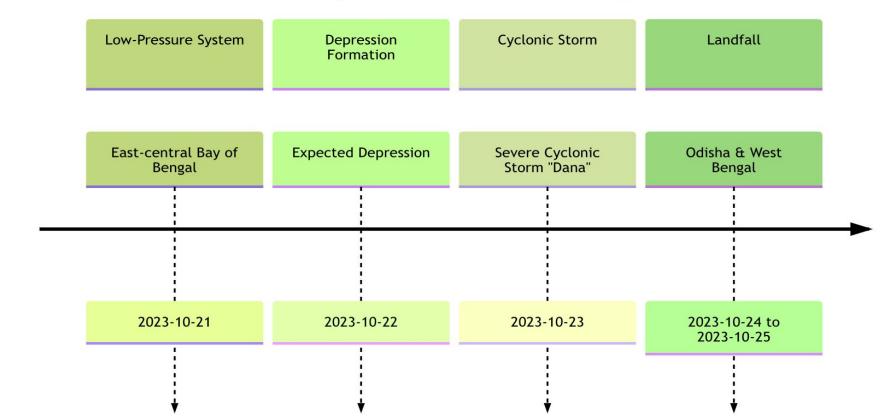
Wind Speeds: The cyclone is expected to bring wind speeds reaching up to 120 km/h at the time of landfall.

Recent Cyclones: Dana will be the second cyclone in the North Indian Ocean within a span of less than two months, following Cyclone Asna in late August.

Naming Convention: The name "Dana," meaning "generosity" in Arabic, was selected by Qatar, following the regional naming conventions for tropical cyclones.

Development Timeline: The IMD predicts the system will develop into a depression by Tuesday morning, October 22, and escalate to a cyclonic storm by Wednesday

## Cyclone Dana Development



## Cyclone Naming Initiative\_\_\_\_



#### Cyclone Naming Origin

In 2000, the WMO/ESCAP group initiated the naming of cyclones in the Asia-Pacific region.

#### Participating Nations

Original member countries included:

Bangladesh

India

Maldives

Myanmar

Oman

Pakistan

Sri Lanka

Thailand





Each country contributed suggestions for cyclone names.

Names were finalized by the WMO/ESCAP Panel on Tropical Cyclones (PTC).

#### **Expansion of Membership**

In 2018, five additional countries joined:

Iran

Qatar

Saudi Arabia

**United Arab Emirates** 

Yemen

#### **II** Cyclone Name List

A total of 169 cyclone names were released by the Indian Meteorological Department (IMD) in April 2020.\_\_\_\_\_

Each of the 13 countries provided 13 name suggestions.

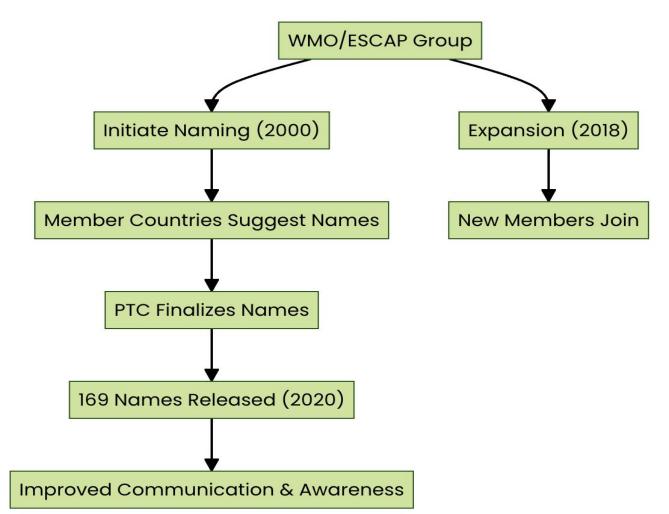


The initiative aims to improve communication and awareness regarding tropical cyclones in the region.

## Regional Collaboration

The naming process reflects a collaborative effort among nations to address the challenges posed by cyclones.





#### Cyclone Naming Conventions\_



#### Naming Benefits

Enhances Memory: Naming cyclones aids in memory retention for both the public and professionals.

Boosts Awareness: Increases awareness and preparedness for impending cyclones.

### Target Audience

Broad Reach: Names assist not only the general public but also scientists, media, and disaster managers in identifying cyclones.

#### Naming Guidelines

Neutrality: Proposed names must be neutral regarding politics, religion, culture, and gender.

Respectful: Names should not offend any group.





Avoid Rudeness: Names should be respectful and considerate, avoiding any rude or cruel connotations.

#### Name Characteristics

Simplicity: Cyclone names should be short (up to eight letters) and easy to pronounce.

Guidance: Pronunciation guidance should accompany the names.

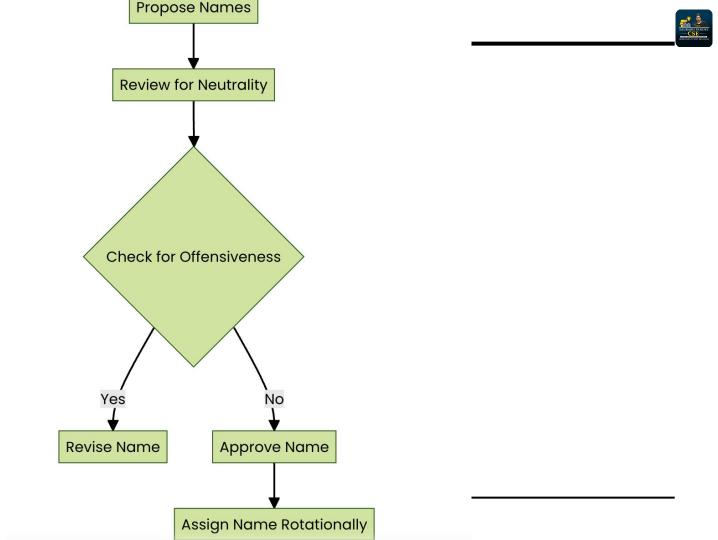
## 🔄 Rotational System

Alphabetical Order: Names are assigned on a rotational basis, following the alphabetical order of the proposing countries.



Diverse Sentiments: The naming process considers the sentiments of diverse populations worldwide to avoid conflict.

Summary: Naming cyclones enhances communication and preparedness while adhering to strict guidelines to ensure respect and clarity.



## 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 Sanjiv 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 wa

in December amended 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 Amendduring the ment 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.

#### **Topic** → **Supreme Court's Stance on Secularism and Socialism**



#### **Key Highlights**

m Supreme Court's Stance: Affirmed secularism as a fundamental part of the Constitution's Basic Structure.

Petition Background: Addressed challenges to the inclusion of "socialist" and "secular" in the Constitution's Preamble.

Judicial Precedent: Justices Khanna and Kumar cited past judgments recognizing secularism as a core constitutional feature.

Socialism Interpretation: Justice Khanna emphasized a broader view of socialism, focusing on equality and wealth distribution.

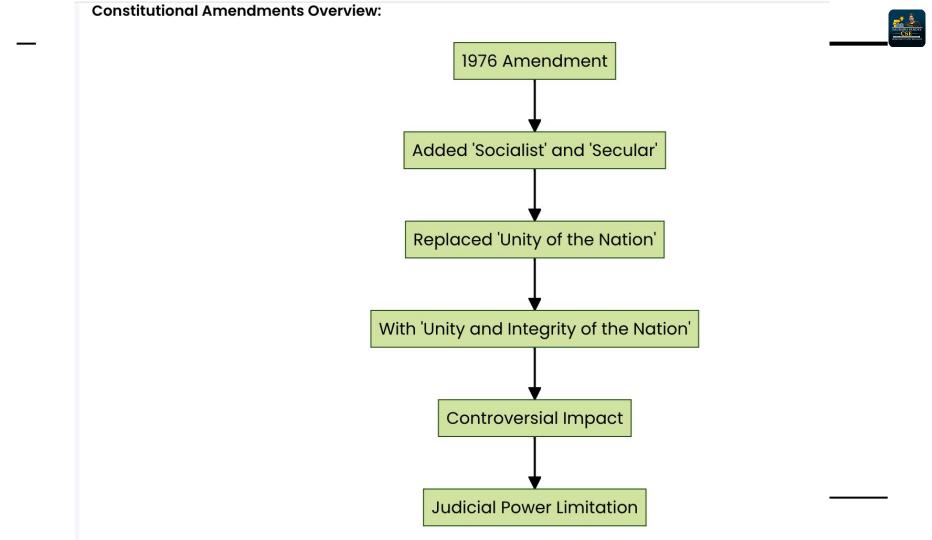
Preamble Amendment: In 1976, "socialist" and "secular" were added, altering "unity of the nation" to "unity and integrity of the

nation."

Historical Context: The 42nd Amendment, during Indira Gandhi's tenure, was controversial for its impact on judicial power.

Kesavananda Bharati Case: Established the Preamble's integral role in the Constitution, allowing amendments without altering the Basic Structure.

Summary: The Supreme Court upheld secularism as a core constitutional principle while reviewing the controversial 1976 amendment that added "socialist" and "secular" to the Preamble





Colombian women perform during the opening coremony of COP16, a United Nations' biodiversity conference, in Cali, Colombia, on

#### World lags on 2030 nature goals as COP16 talks begin

The world in 2022 reached in most ambition deal over to shalt the state of the control of the co

billions of dollars away from meeting a 2025 goal.

The summit in Colombia, marking the 16th meeting of nations that signed the original 1992 Convention on Biodiversity, is set to be the largest biodiversity summit to date, with some 23,000 delegates registered to participate as well as a large

There has been no let up in destructive activities like logging and overfishing, but governments have missed their deadlines on action plans, and funding is well short of the goal

exhibition area open to the public.

Whether the participation and pressure can push countries towards bolder conservation actions remains to be

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

had filed a plan with the UK. biodiversity secretariat.

Secretariat. In how been gaided to fail the plan of the p

ikely struggle to gauge progress in meeting the agreement's hallmark "30 by 30" goal of preserving 30% of the land and sea by 2030.

Colombia's Environment Minister Susana Muhamad, who also serves as COP16's president, said the summit must COPIG's president, said the summit must also address why so many others are late. "It could be that the funds are not enough, for example, to be able to produce the plans," she said. Poorer countries have had a harder-time finding the funding and expertise



### **Topic→COP16 Biodiversity Summit Overview**



#### **Key Highlights**

2022 Agreement: Nearly 200 nations agreed to halt nature destruction by the end of the decade, but progress has stalled.

marking it as the largest biodiversity summit.

Funding Focus: Emphasis on finding new funding initiatives for conservation, with current funding falling short of the 2025 goal.

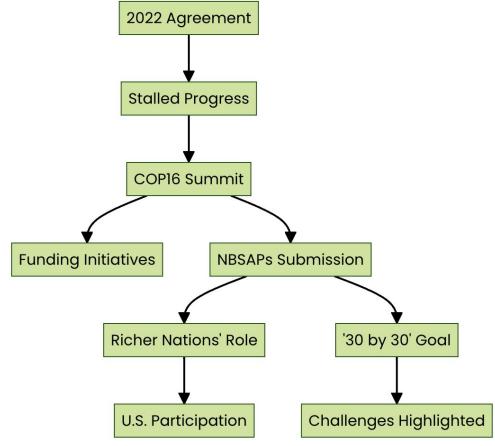
NBSAPs Submission: Only 31 out of 195 countries have submitted their National Biodiversity Strategies and Action Plans by October 18.

Richer Nations' Role: These countries have been quicker to submit plans, while the U.S. participates without obligation due to not ratifying the Convention on Biodiversity.

"30 by 30" Goal: The lack of submitted plans complicates the assessment of progress towards protecting 30% of land and sea by 2030.

Challenges Highlighted: Colombia's Environment Minister pointed out delays due to insufficient funding and expertise in poorer countries.





**Summary:** The COP16 summit in Colombia aims to address stalled biodiversity goals, with significant concerns over funding and the lack of national conservation plans from many countries.

## Black holes in Webb data allay threat to cosmology's standard model

Using data from the Webb telescope, studies found the universe should have had massive galaxies sooner than believed. Their conclusion undermined the standard model of cosmology, which attempts to explain the universe's origins. But a new study may have saved the model

#### Shreejaya Karantha

ince NASA launched the James Web Space Telescope (JNST) almost three years ago, astronomers have been actively searching for clues about how glassies grew in the early universe. This universe was a dark place: there is no light from this period to let us how the first stars and galaxies formed, yet uncovering these processes could help answer key questions like the role of dark matter in the early universe.

the early universe.

So when astronomers recently pored through JWST, they were surprised to find monstrous structures when the universe was only a few hundred million years old, instead of infant galaxies.

The universe began with a Big Bang about 1.3 b lillion years ago as a hot, dense mixture of gases and substomic particles. Over time, the universe expanded and cooled, allowing the particles to separate from the mixture and become independent clumps of matter. The gradual and continuous cooling of the universe eventually created larger structures such as stars, galaxies, and galaxy clusters.

According to the standard model of cosmology, which attempts to explain the universe's origins and evolution, the first stars formed around 100-200 million years after the Big Bang and the first galaxies within the first billion years.

gataxies within the irist billion years. But JIMST was revealing massive, fully-developed galaxies, that too in greater numbers than expected, only around 400-650 million years after the Big Bang. This mismatch became a source of intrigue among researchers, who had to figure out what was wrong with their standard model.

Now, a study published on August 26 in the Astrophysical Journal by an international team led by Katherine Chworowsky and Steven Finkelstein at the University of Texas at Austin offers a promising explanation.

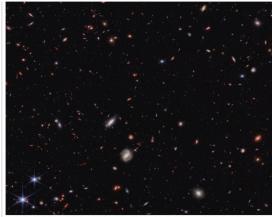
#### Deep into the universe

Distant galaxies are faint, and detecting them requires advanced telescopes, Prerana Biswas, a postdoctoral researcher at the Indian Institute of Astrophysics, Bengaluru, explained. (She wasn't involved in the new study.)

involved in the new study). This means, first, a telescope with a large primary mirror. The Hubble Space Telescope has a 24-m wide primary in 6.5 m wide. The primary mirror is 6.5 m wide. See that the primary is 6.5 m wide. See sensitive, which relates to its shilling to record data at different weelengths. The Hubble operates in the optical, ultraviolet, and some inflared wavelengths, while [WST is specifically designed for infrared observations with a focus on studying the early universe. This is because visible and ultraviolet light from disaunt galances shifts to the infrared from disaunt galances shifts to the infrared

In the new study, researchers analysed data from the JWST's Cosmic Evolution Early Release Science (CEERS) Survey, which Finkelstein leads. They focused on galaxies that existed when the universe was 650-1.500 million wears old.

According to the team, one possible explanation for a larger number of massive galaxies in the early universe is that these galaxies manufactured stars more efficiently than the galaxies of today. Biman Nath. a professor of astronomy



A small portion of the field observed by the James Webb Space Telescope filled with galaxies. The light from some of them has travelled for over 13 billion vers to reach the telescope. JUSTINASA

and astrophysics at the Raman Research Institute, Bengalaru, said the higher efficiency of star formation "wouldn't affect the large-scale structure" of the universe "because the bulk of these large-scale structures is produced by dark matter, so what happens to a tiny fraction of normal matter (whether or not they produce stars at a faster rate) wouldn't affect it."

He added that the specifics of whether the modified efficiency contradicts the current understanding of galaxy formation need to be worked out. Biswas agreed, saying that if this value is found to have been higher in the early universe, existing models of galaxy growth and evolution may need to be reworked.

#### A secret ingredient

The researchers also examined the black holes at the centres of these ancient galaxies. These objects are also called "little red dots" because of what the light from their direction looks like. These black holes rapidly consume the galaxies; gas, causing the latter to emit heat and light.

"The fact that massive black holes contribute to the total light emitted by their host galaxies has been known for some time, and there has been research and work done to disentangle light coming from black holes from the light coming from stars to accurately measure the masses of stars in galaxies, Chworowsky said.

"However, before JWST, we had not seen galaxies that looked specifically like little red dots, therefore it was not known that they often hosted black holes until they had been independently studied," the added



However, before JWST, we had not seen galaxies that looked specifically like little red dots, therefore it was not known that they often hosted black holes until they had been independently studied

In other words, the star mass of galaxies may have been overstated in previous studies thanks to the additional light emitted by their black holes. When the researchers in the new study removed these little red dost from their data for analysis, they found that the galaxies weren't as massive as previously estimated, thus sparing the standard model of cosmology from revision.

#### The bottom I

The bottom line
The researchers wrote in their paper that
the standard model could explain more
efficient star formation in the early
universe in the form of the extreme
physical conditions and abundant gas.
Catastrophic events like supernovae and
stellar winds were also less effective at

disrupting star formation.

"The standard model of cosmology remains the most successful framework for describing our universe," Biswas said.
"There are only a handful of studies that contradict this model. It is not surprising that JWST observations align with its predictions. It would be far more surprising these observations align with its predictions. It would be far more surprising these observations.

n challenged this model."

Previous JWST observations of massive,
well-developed galaxies in the early
universe had questioned the standard

model, including the universe's age, the timeline for the formation of the first galaxies, and galaxy formation theories. For example, a recent study used JWST data to say spriat galaxies could have emerged in the universe within 1.5 billion years, much earlier than previously expected. As evidence, the researchers pointed to an exceptional star formation conclusions could be over turned now. The authors of this study declined in the other processing the properties of the pro

comment.

Nath, who wasn't involved with the new study, added that the problem of observations not matching the standard model's predictions "become acute when the JWST observations of even earlier galaxies are considered, going back to when the universe was around 400 million years old."

Chworowsky said the team is working on including more data from JWST in addition to CERS. "This will give us the ability both to push this analysis to higher redshifts and higher masses, as those galaxies are rarer and we're more likely to be able to find them in larger sets of data."

Expanding the data set will help researchers get a better sense of the current results and develop a more comprehensive understanding of the formation of massive galaxies in the early universe.

"I am happy to see that astronomers are working towards these problems," Nath said. "Maybe it is possible, after all, to find some explanation within the current models."

(Shreejaya Karantha is a freelance science writer and a content writer and research specialist at The Secrets of The

#### \_Topic→James Webb Telescope\_\_\_



#### Overview

What is it?: Next-generation space telescope

Purpose: To explore the universe's earliest galaxies, stars, and planets



#### **Key Discoveries**

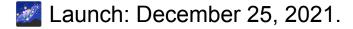
Super Star Clusters: Observations of unique star clusters in the Milky Way 🌠



'Inside Out' Galaxies: Discovery of unusual galaxies from the early universe 🌌



Quasars: Detection of quasars in unexpected locations \*\*



#### **Technology**



Infrared Capabilities: Allows for observing distant cosmic phenomena 🌈



Mirror Design: Large segmented mirror for enhanced light-gathering power 🔭



#### **Scientific Impact**

Cosmology Studies: Insights into the formation and evolution of the universe



Stellar Evolution: Understanding star formation processes 💫



Planetary Science: Studies of planetary atmospheres and compositions (3)



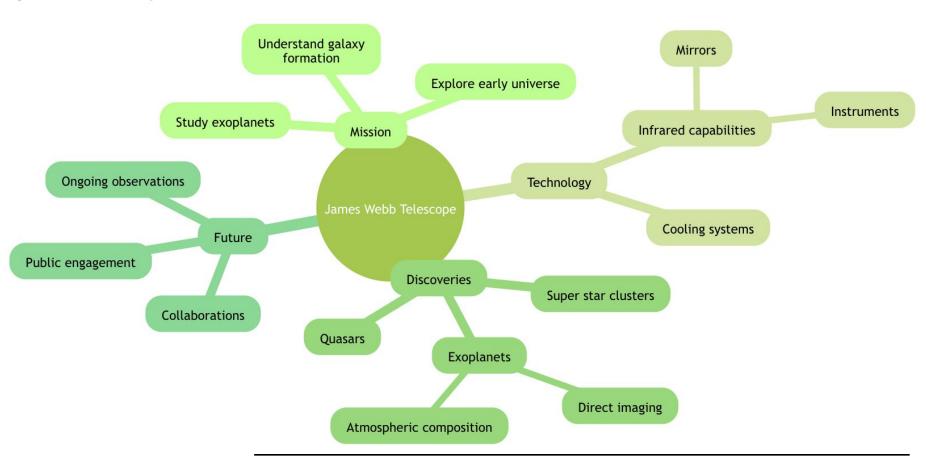
#### **Future Prospects**

Further Missions: Continued exploration of the universe's mysteries Q



institutions 🤝





#### An approaching milestone in constitutional governance



ovember 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 withstood 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 elections in 1951-52, we have consistently witnessed nearly 60% of Indians participating in elections including in the 2024 general election where there was a a 65.79% voter turnout. The respect for democracy and faith in democratic institutions in India is a core constitutional value that has withstood 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 presence, within a State and/or at a pan-India 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 the



C. Raj Kumar

the Vice Chancellor of O.P. Jindal Global University

India has every

reason to

years of

celebrate 75

constitutional

governance

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 imbibed 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 recognising 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 recognising 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 civic 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 contribution to the development of national political consciousness. This has, on several occasions, led to strong State parties contributing to the development 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 panchayati raj institutions and nagarralifus.

The part played by media, civil society Fifth, the role of the media and civil society in instilling 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 innovations in 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 recognise 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.

Constitutional governance.

After Independence, the last British commander in chief of the Indian Army, General Claude Auchinleck had observed, "The Sikhs may try to set up a separate regime. 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 Punjabi is as different from a Madrassi 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.

## Topic-- >75th Anniversary of the Indian Constitution-- constitutional\_

## governance

#### **Key Highlights**

75th Anniversary: November 26, 2023, marks a significant milestone in Indian history with the 75th anniversary of the adoption of the Constitution of India.

m Constitutional Governance: The governance in India is not only about laws but also a deep-rooted constitutional culture that mirrors the diverse consciousness of its people.

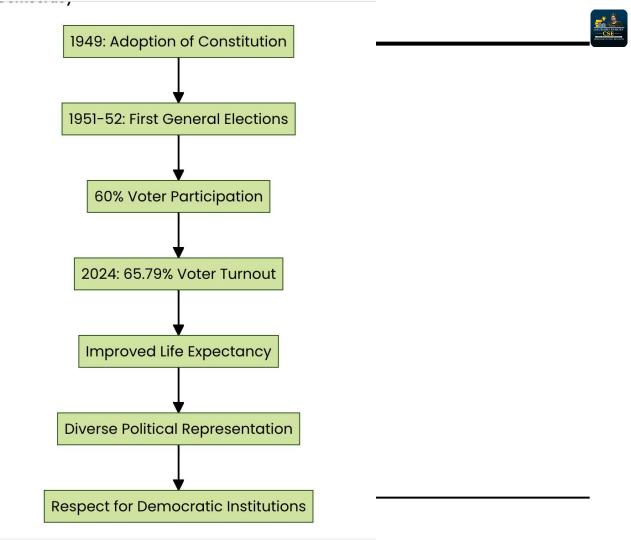
Voter Participation: Since 1951-52, approximately 60% of Indians have participated in elections, with a remarkable 65.79% turnout in the 2024 general election.

Smooth Power Transition: India is known for its tradition of smooth———transitions of power between elected governments, irrespective of political

Improved Quality of Life: Life expectancy has significantly increased\_ from around 32 years at the time of the Constitution's adoption to approximately 70 years today, indicating substantial social and economic progress.

Respect for Democratic Institutions: A core constitutional value, the respect for democratic institutions, has remained robust over the decades.

Diverse Political Representation: The presence of various political parties and leaders representing different ideologies highlights the electorate's understanding of national challenges.



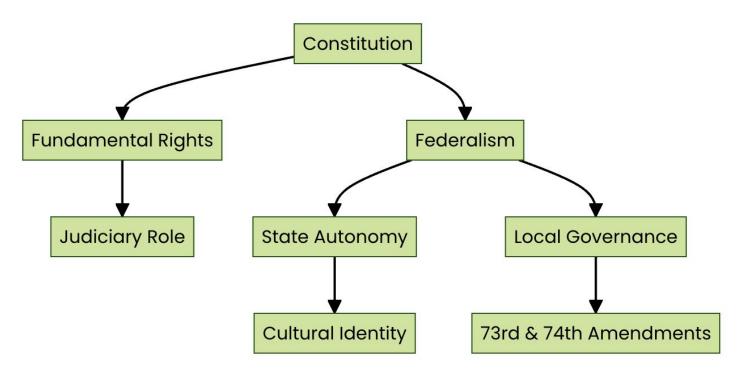
#### **Key Aspects of the Indian Constitution**



- m Protection of Rights: The Constitution underscores the significance of fundamental rights and the judiciary's role in their protection.
- Historical Context: The framers, influenced by the freedom movement, were dedicated to safeguarding individual rights against state power.
- Skepticism of State Power: The drafters ensured that individual freedoms were prioritized within the constitutional framework.
- Federalism: Recognizing India's diversity, the Constitution grants autonomy and special privileges to states to preserve their unique identities and cultures.
- Equity and Inclusivity: Special provisions aim to address regional disparities and foster inclusivity among the populace.
- Political Evolution: The rise of state-level political parties has significantly influenced national politics and coalition governance.
- Local Governance: The 73rd and 74th Amendments established local self-governance institutions, strengthening federalism in India.



#### **Conceptual Overview:**



#### \_Indian Media and Democracy\_\_\_



#### **Diverse Media Landscape**

Heterogeneous Institution: The Indian media is a diverse entity with multiple perspectives across various languages.

#### **Media Evolution**

Transition and Innovation: The shift from print to broadcast, along with technological advancements, has democratized information access.

#### **Role in Democracy**

Crucial Role: Media and civil society have been pivotal in fostering trust in Indian democracy.

# \_Challenges and Values\_



Media Autonomy: Despite challenges, transparency remains a fundamental value in media culture

## **Informed Electorate**

Explosion of Information: The surge in information has led to a more informed Indian electorate about media and civil society roles celebrating Governance

75 Years of Governance: Reflecting on 75 years of constitutional governance in India, highlighting its achievements



### **Governance Celebration:**



# \_National Identity



Forging Identity: India has successfully created a national identity despite its diverse cultural landscape, countering historical skepticism

## **National Identity:**



**Summary**: The Indian media and civil society have significantly contributed to democracy, fostering an informed electorate and celebrating 75 years of constitutional governance.

# The case for a nature restoration law in India



he 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 as over 80% of Europe's habitats are in poor condition. It focuses on a broad range of 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 India is grappling 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 underwent land



Tuhin A. Sinha

National
Spokesperson,
Bharatiya Janata

Party



Kaviraj Singh
Founder and
Managing Director,
Farthood

The law enacted by the European Union recently is a model worth following degradation in 2018-19, a sharp increase from 94.53 million hectares in 2003-05. Desertification, in particular, is a growing concern, with 83.69 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 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. While peatlands 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 (SDGs) 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 absorb carbon dioxide, 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.

# \_Topic→Ecosystem Restoration and Land Degradation\_\_\_



## Global Issue 🌍



Countries like India, with rich ecological diversity, are significantly affected.

## Land Degradation in India



30% of India's geographical area is experiencing land degradation.

97.85 million hectares were affected as of 2018-19.

# Nature Restoration Law (NRL)

Enacted by the EU on June 17, 2024.

Aims to restore 20% of land and sea areas by 2030.

Full restoration of all ecosystems targeted by 2050.



Part of the EU's Biodiversity Strategy for 2030 and the European Green Deal.

Addresses the alarming loss of biodiversity in Europe.

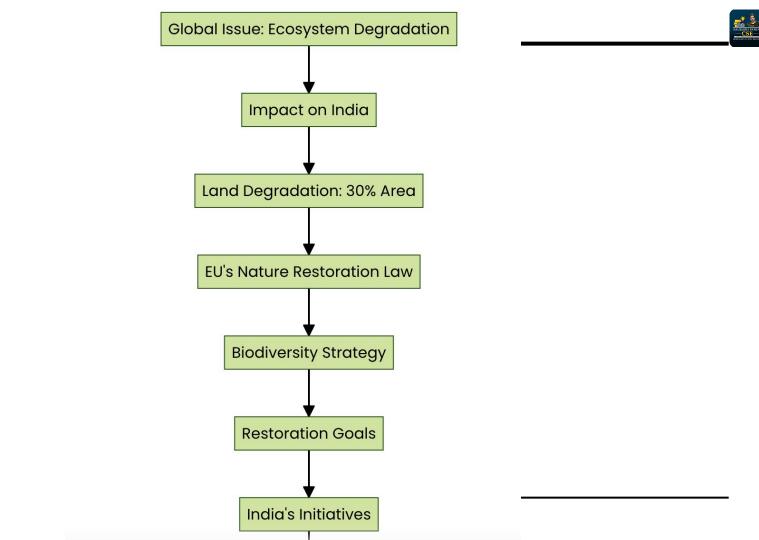
## Restoration Goals

Includes measures like restoring 25,000 kilometers of rivers. Planting three billion trees by 2030.

# India's Initiatives 🜊

Programs like the Green India Mission and the National Afforestation Programme have been initiated.

A comprehensive nature restoration law similar to the EU's is needed.



## **Need for Comprehensive Approach**



The scale of environmental challenges in India requires a legally binding framework.

Essential for ensuring sustainability in ecosystem restoration.

Summary: India faces significant land degradation challenges, necessitating a comprehensive nature restoration law inspired by the EU's Nature Restoration Law to ensure ecosystem sustainability

## \_Nature Restoration Law in India\_



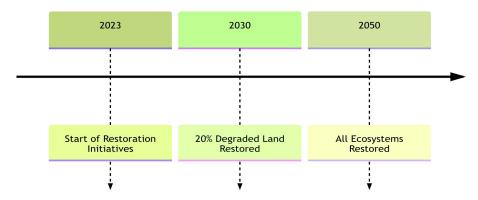
## **Restoration Targets**

Goal: Restore 20% of degraded land by 2030 and all ecosystems by 2050.

Focus Areas: Forests, wetlands, and urban spaces.

**Restoration Timeline:** 

### **Restoration Goals**





Objective: Restore 30% of degraded wetlands by 2030.

Key Areas: Sundarbans and Chilika Lake

# Biodiversity in Agriculture 🐦

Strategies: Promote agroforestry and sustainable practices.

Indicators: Use butterfly or bird index to track progress.

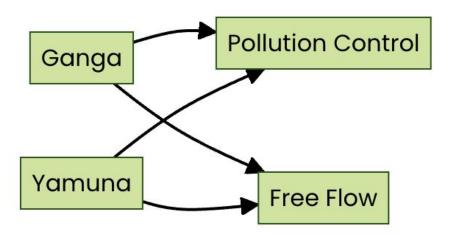
# River Restoration

Priority: Major rivers like the Ganga and Yamuna.

Goals: Address pollution and ensure free-flowing rivers.



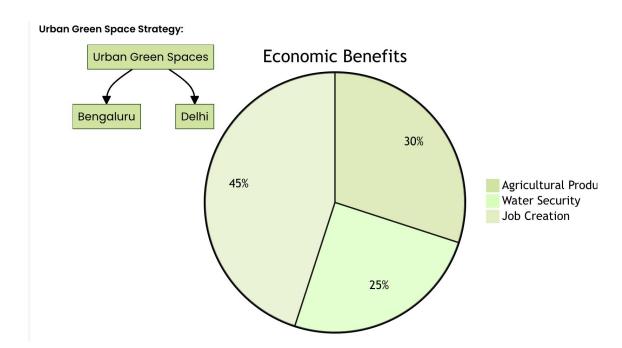
## **River Restoration Plan:**





Policy: No net loss of urban green spaces.

Target Cities: Bengaluru and Delhi



## **Economic and Social Benefits**



Potential: Generate up to \$10 trillion globally by 2030.

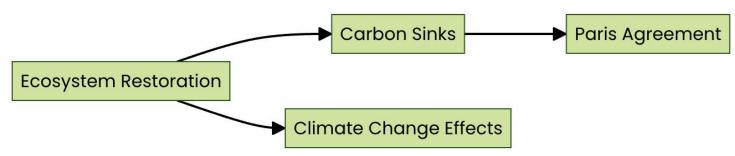
Benefits: Enhance agricultural productivity, water security, and job creation.

# Climate Change Mitigation 🌍

Contribution: Help meet Paris Agreement commitments.

Mechanism: Enhance carbon sinks and combat climate change effects.

## **Climate Mitigation Strategy:**



**Summary**: A proposed Nature Restoration Law in India aims to restore ecosystems, enhance biodiversity, and provide significant economic and climate benefits by 2030.



# On Railways decision to shrink advance booking period

<u>Has the Railways shortened the Advance Reservation Period before?</u> How do longer booking windows give rise to frauds? Are these rules extended to foreign passengers as well?

#### Maitri Porecha

#### The story so far:

ne could book railway tickets four months in advance for long journeys. Now passengers will only be able to book tickets on Indian Railways two months in advance, a circular released by the Railway Board earlier this month stated.

# When will the Advance Reservation Period (ARP) be effective?

The circular states that the new ARP rules will kick in from November 1, 2024 onwards, and that the booking window for passengers to reserve their tickets will open 60 days in advance (excluding the actual day of journey). However, if a passenger has booked any tickets up to October 31 (under the earlier 120-day period rule), all those bookings will remain intact, and the passenger also has the facility to cancel those tickets at will. By shortening the reservation period to

60 days, the Railways has reversed its 16-year old policy of reserving tickets 120 days in advance, which had kicked in from May 1, 2008. Before this, from 1995 to 2007, the booking window was restricted to 60 days. Interestingly, between 1988 to 1993, Railways had experimented with shortening the advance booking window to as less as only 45 days. Before this, once between 1981 to 1985, the Railways had opened the ARP for a 90-day window.

#### Why was such a decision taken?

Railways officials observed that 120 days was too long a period for planning journeys, and that it led to a high amount of ticket cancellations. "Currently, up to 21% passengers who book their tickets end up cancelling them," a senior official stated. While allotting seats/berths, officials also observed that there was a wastage of seats/berths because of passengers who would not turn up for journeys and at the same time would not

bother to cancel their tickets. "4% to 5% passengers don't turn up (which is considered as no show)," the official further said. "Another trend Railways noticed is that between 88% to 90% rail reservations occur in the period of 60 days, hence it was thought prudent to reduce the ARP," another senior official told *The Hindu*.

## Do longer booking windows increase frauds?

The rationale given by the officials to reduce ARP is that when passengers do not cancel their tickets and do not turn up for journeys, it opens up possibilities for fraud. "We observed frauds such as impersonation, railway officials taking money illegally to allot empty berths etc. With shortening reservation period this could be prevented," the official said.

Secondly, there is an immense challenge of curtailing touts that operate on the railway network. "When reservation periods are longer, there is a greater chance that touts end up blocking a substantial tranche of tickets. Shortening the period of ARP will encourage purchase of more tickets by genuine passengers," the official added.

Parallelly, Railway officials state that the decision to either reduce or increase the ARP window is open for debate. "There are two opposing camps that debate how to fix the ARP window. There is one camp in the Ministry that believes in opening up advance reservation for the entire year, and that passengers should be allowed to book and cancel tickets round the year during the period of 365 days. This camp believes that opening up the reservation window year-long will fetch railways revenues in advance. However this facility is currently only available for foreign tourists, who avail of a certain quota to plan their train journeys across India," the official added.

## Which groups of passengers are exempt from ARP rule?

Apart from foreign tourists, the Union Railway Ministry had stated that there is no impact on General class tickets as they are purchased just before the journey. It has also stated that for certain trains like Taj Express and Gomti Express it was noticed that tickets are booked almost immediately by passengers who wish to travel in these sitting trains. "They are exempt from ARP rule as passengers who wish to travel in these trains book tickets almost immediately a day or two in advance," the first official added.

### THE GIST



The circular states that the new ARP rules will kick in from November 1, 2024 onwards, and that the booking window for passengers to reserve their tickets will open 60 days in advance (excluding the actual day of journey).



Railways officials observed that 120 days was too long a period for planning journeys, and that it led to a high amount of ticket cancellations.



The rationale given by the officials to reduce ARP is that when passengers do not cancel their tickets and do not turn up for journeys, it opens up possibilities for fraud.

# **Topic**→**Advance Reservation Policy Update**



Key Updates on Advance Reservation Policy

New ARP Effective Date: The Advance Reservation Period (ARP) will be effective from November 1, 2024, with a booking window of 60 days in advance.

Previous Booking Policy: The previous ARP allowed bookings up to 120 days in advance, a policy in place since May 1, 2008.

Historical Changes: The ARP has varied over the years, with periods of 60 days (1995-2007), 45 days (1988-1993), and 90 days (1981-1985).

Cancellation Rates: Currently, about 21% of passengers cancel their tickets, leading to wastage of seats and a high no-show rate of 4-5%.

○ Fraud Prevention: Shortening the ARP is aimed at reducing fraud and ticket\_ touting, as longer booking windows have been linked to impersonation and illegal ticket allotments.

Sexemptions: Foreign tourists and certain trains like the Taj Express and Gomti Express are exempt from the new ARP rules, as their tickets are typically booked close to the travel date.

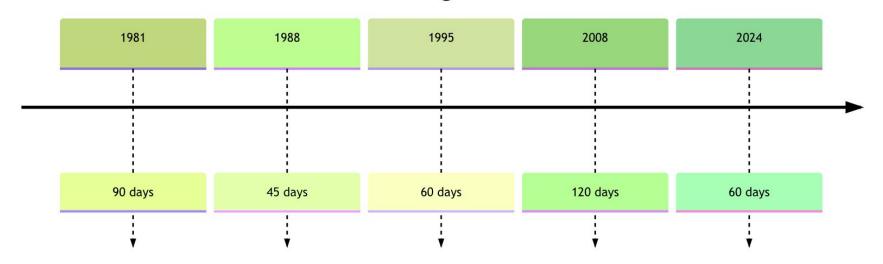
Ongoing Debate: There is an ongoing discussion within the Ministry about whether to maintain or further adjust the ARP, with some advocating for a year-round booking option.

Summary: The Indian Railways will shorten the Advance Reservation Period to 60 days starting November 1, 2024, to reduce cancellations and fraud, while certain groups remain exempt from this rule.



## **Historical ARP Changes:**

# **ARP Changes Over the Years**



# On sanctions and shadow fleets

What are Flags of Convenience? How do corporations with large fleets obscure ownership and origin of cargo? Why has India been accused of hosting a shadow fleet? What are the different ways through which ships make sure they don't lose their insurance?

#### EXPLAINER

#### M. Kalyanaraman

#### The story so far:

hile covering the Russia-Ukraine conflict, many western media outlets have used the term 'shadow fleet' to describe tanker ships that carry Russian crude oil or oil products to other countries. The term conjures up images of pirate-like vessels and phantom owners trading in illegal, contraband substances. India has been painted as a host of a shadow fleet that is 'laundering' Russian crude.

#### How are sanctions implemented?

When the U.S. sanctions a country, as is the case with Russia, it launches investigations into entities, companies and individuals who violate the sanctions. Their assets in the U.S. are seized, bank accounts accessible to the western banking system are frozen and, sometimes, criminal prosecutions are launched against them. U.S. sanctions against Russian oil mandate that Russia can only sell its crude oil at \$60 a barrel. Current market prices are at least \$15 more. This is to ensure Russia doesn't profit much from oil sales and use that to fund its war effort in Ukraine.

#### What is structure of global shipping? The global shipping industry is highly diversified, Greeks own 20% of the global merchant shipping fleet with China now crossing Japan to become the second leading nation in terms of merchant shipping fleet ownership. Most ships are built and repaired in China, Japan and South Korea. Yet, marine insurance, ship finance as well as global shipping regulations revolve around the U.K. and rest of Europe, U.S. sanctions are sought

to be enforced through these levers. Each ship is associated with different stakeholders at various nations and locations. Although tracking systems



Full throttle: The crude oil tanker RN Polaris near the port city of Nakhodka, Russia, in 2022, REUTERS

allow authorities to access previous ports of call, some companies do succeed in hiding the original source of their cargo. Ships are registered in particular nations called flag states as they fly that country's flag. Flag states were meant to indicate the origins of the ship.

To beat sanctions, ships often hop between flags. There are Flags of Convenience (FoCs), such as Panama and Liberia, which started out as tax avoidance entities, and to avoid too rigorous a scrutiny or inspection of a ship. FoCs obscure the ownership of ships. Then there are classifications societies (class, in shipping parlance) that certify ship structures and machinery for safety of life at sea and marine pollution. facilitating insurance cover for these. An insurance type called Protection and Indemnity (P&I) covers loss of life and damage to property. These P&I insurance

firms form 'clubs' to pool the risk.

How do ships keep their insurance? Turkey, a member of the NATO, has been found to be extensively trading in Russian oil. A Turkish-owned ship found to be trading in Russian oil at more than \$60 a barrel may lose its P&I club, since clubs are controlled from London and the U.S. has leverage there. However, the owner can divest the management of the vessel and contract with a European manager that has P&I cover, And the ship will be back in business with the same owner but with a new European manager. Corporations with large fleets often set up shell companies that own just one or two ships. Such complex ownership structures hide the true identity of a ship and its owner. Yet, another phenomenon is registering the ships within jurisdictions that are not compliant with regulatory

agencies such as the International Maritime Organization (IMO), Eswatini, a country in southern Africa, is not a signatory to the IMO charter. It has therefore emerged as a FoC.

#### What is the accusation against India? Soon after sanction enforcements, many

Russian ships struck alliances with Indian firms. Many switched their base to Dubai where Indians have a presence in shipping. The Indian Register of Shipping (IRS), a classification society, did see an increase in the ships it was certifying, bolstering charges of Indian involvement in shadow fleets. Noting that it has been linked to Russian shipping entities, the IRS said its primary responsibility is to the safety of a vessel and that it will not be compromised. IRS reported that it has indeed been asked to provide safety-related classification services to a number of vessels by Dubai-based entities. These vessels were registered under the flag administrations of Liberia and Cyprus and none flew the Russian flag, the IRS reported.

In 2015, when Iran was sanctioned, some 160 ships, many with trade links to Iranian oil, switched their classification society to the Korean Register of shipping - Korea is a U.S. ally. Sometimes renaming a vessel can help to erase association with sanctions.

#### Can U.S. sanctions be enforced?

Many agencies and shipping experts acknowledge that sanctions on Russian oil cannot be rigorously enforced because of its potential impact on world economy, the complex ways in which the shipping industry is structured, and because ownerships and origins of stakeholders are obscure and often based on voluntary disclosure.

More recently, the BBC reported that the U.K. had taken action only mild action against some 35 U.K. companies found to have violated the price cap set by sanctions. Industry voices there say that taking strong action would be bad for U.K. businesses.

#### THE GIST

Ships are registered in particular nations called flag states as they fly that country's flag. Flag states were meant to indicate the origins of the ship. To beat sanctions, ships often hop between flags.

Another phenomenon is registering the ships within jurisdictions that are not compliant with regulatory agencies such as the International Maritime Organization (IMO).

Many agencies acknowledge that sanctions on Russian oil cannot be rigorously enforced because of its potential impact on world economy, the complex ways in which the shipping industry is structured, and because ownerships and origins of stakeholders are obscure and often based on voluntary disclosure.

# Topic→Shadow Fleet and Global Shipping Dynamics



# Shadow Fleet Concept

Western media labels tanker ships carrying Russian oil as a 'shadow fleet'. Implies illegal activities and connections to India as a laundering hub.

# 💰 U.S. Sanctions on Russia

U.S. sanctions cap Russian crude oil sales at \$60 per barrel.

Market prices exceed this cap by at least \$15.

Aims to restrict funding for Russia's war efforts in Ukraine.

# Global Shipping Landscape

Diverse industry with Greece owning 20% of the fleet.

China surpasses Japan in ship ownership.

Most ships built in China, Japan, and South Korea.

Regulations centered in the U.K. and Europe.—





Ships switch flags to evade scrutiny.

Use jurisdictions like Panama and Liberia to obscure ownership.

# Insurance and Compliance

Turkish ships trading Russian oil risk losing Protection and Indemnity (P&I) insurance.

Can circumvent this by changing management to European firms.

## India's Involvement

Russian ships allied with Indian firms post-sanctions.

Accusations of India facilitating shadow fleets.

Indian Register of Shipping focuses on vessel safety.



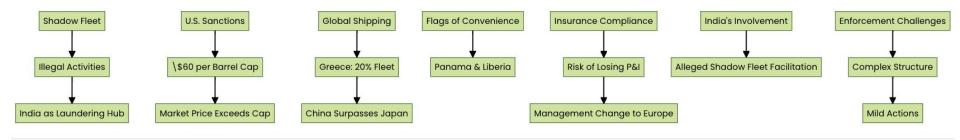


U.S. sanctions on Russian oil are difficult to enforce.

Complex shipping structure and potential global economic repercussions. Only mild actions taken against violators.

Summary: The intricate dynamics of global shipping, U.S. sanctions on Russian oil, and India's alleged involvement in shadow fleets underscore significant challenges in enforcing international regulations.

## **Global Shipping Dynamics:**



D) Ladhak

Q2. Consider the following statements in context of the Gold Production. (The Hindu)

1) Gold is a precious metal with
the atomic number 69 and the
Latin name 'aurum', symbolized as
Au on the periodic table
2) Around 10% of gold produced
globally is utilized in various
industries due to its desirable
properties, including being
corrosion-resistant and a good
conductor of electricity

4) Each Nobel Prize awarded from is a featured medal made of electrum, an alloy of gold and silver, plated with 24-carat gold.

3) While South Africa is the largest

producer of gold, China holds the

second position.

Q3. This is a wildlife sanctuary situated on the northern boundary of Madhya Pradesh and the adjoining Rajasthan state in India. It was notified in 1974. The Chambal River passes through the sanctuary dividing it into two parts. It is in the Khathiar-Gir dry deciduous forests ecoregion. Which of the following Wildlife Protected Area is

- Wildlife Protected Area i described above. (DTE) A) Kuno National Park
- B) Gandhi Sagar Wildlife Sanctuary.
- C) Sailana Wildlife Sanctuary
  D) Madhav National Park

Q4. Consider the following statements. (DTE)

Statement I: Inclusive institutions were often introduced in countries that were poor when they were





## How policies shape high-performance building standards and climate goals

Governments are trying to adopt high-performance buildings through policies and financing mechanisms that promote energy efficiency, resource management, and carbon neutrality. India has made significant progress through initiatives under its National Action Plan on Climate Change

#### Sandhya Patil

n response to the pressures of climate mitigation as well as adaptation, High-Performance Buildings (HPBs) are emerging as essential solutions in the construction sector. They address both urban and climate challenges since the built environment contributes to these issues and presents opportunities for change. HPRs are designed to reduce greenhouse-gas emissions, minimise energy and water use, and cut operational costs using climate-adaptive designs. They also improve their occupants' well-being, making them attractive to both businesses

and occupants. Beyond environmental benefits, HPBs offer financial advantages like enhanced property value, lower utility bills, and access to carbon financing. Governments worldwide are trying to adopt HPBs through progressive policies and financing mechanisms that promote energy efficiency, resource management, and carbon neutrality. India is also beginning to align its policy frameworks and business strategies to support these structures.

#### Policies supporting energy efficiency Energy efficiency is central to HPB design and drives sustainable construction practices. Many governments are actively promoting energy-efficient buildings as part of their climate strategies.

The European Union's 'Green Deal', which targets climate neutrality by 2050, mandates energy-efficient building designs and retrofits. Germany's KfW Bank offers low-interest loans for energy-efficient projects while Denmark's strict BRI8 building codes provide

incentives for sustainable construction practices. In the U.S., programmes like Energy Star and the LEED certification encourage energy efficiency and offer tax credits for green-building initiatives.

The construction industry contributes about 39% of energy-related carbon dioxide emissions worldwide, and these policies suggest reducing energy consumption isn't just technically feasible: it could be financially viable, too, with the right incentives

#### How is India supporting HPBs? India has made significant progress in

promoting energy-efficient buildings through initiatives under its National Action Plan on Climate Change, The Energy Conservation Building Code (ECBC), developed by the Bureau of Energy Efficiency (BEE), aims to reduce buildings' energy demands by up to 30%. The Green Rating for Integrated Habitat Assessment (GRIHA) lists more than 3.000 registered projects focusing on sustainable practices and lowering carbon emissions. The Indian Green Building Council (IGBC) promotes energy-efficient designs, with more than 14,000 certified projects covering 12.5 billion sq. ft.

Hyderabad, Noida, and Pune also offer higher floor area ratios and other incentives for buildings that meet ECBC standards, leading to a noticeable increase in green registrations and thus significant energy savings. The REE is targeting 30% of new buildings to achieve net-zero status by 2030, in line with the national commitment.

How do HPBs make financial sense? As green technologies become more affordable, the initial cost difference between conventional buildings and

HPBs deliver substantial energy savings and reduce emissions at little or no incremental costs compared to conventional buildings. For example, Infosys successfully campuses, using natural lighting,

high-performance buildings is narrowing.

integrated energy-efficient designs into its energy-efficient air conditioning, and smart performance verification. This reduced its energy consumption by up to 45%, resulting in significant cost savings. HPBs also improve indoor air quality and thermal comfort, contributing to employee well-being.

HPBs also command higher property values due to lower operating costs, smaller environmental footprint, and growing demand from environmentally conscious buyers and tenants. These properties benefit from enhanced asset valuation, driven by higher net operating incomes, lower vacancy rates, and longer lease durations. The financial benefits of energy efficiency translate to better capitalisation rates, which investors use to assess the value of a property relative to its income potential.

In India, commercial properties with green certifications like IGBC, GRIHA or LEED attract premium rents and have higher occupancy. Examples include ITC's Green Centre in Gurugram, the TCS Siruseri IT Park in Chennai, the Nirlon knowledge Park in Mumbai, and Embassy's commercial developments in

#### How are HPBs financed?

Carbon financing supports HPBs by converting their carbon savings into financial value, easing the way for developers to secure funding. Carbon credits - tradable permits allowing

companies to offset their carbon emissions - play a key role in this process. Projects earn these credits by reducing emissions and/or removing carbon from the atmosphere.

In regions with carbon pricing, like the European Union and China. HPBs that improve energy efficiency and lower emissions can generate carbon credits. These carbon credits provide a significant financial incentive for developers to invest in sustainable building practices. However, to maximise the potential of these systems, it's important to strengthen the accounting practices and ensure better transparency in the monitoring, reporting, and verification of the credits.

Green bonds and climate-focused funds also offer ways to finance HPBs. In 2020 alone, green bonds worth \$269.5 billion were issued worldwide. Investors are increasingly interested in projects that align with sustainability goals. Global organisations like the World Bank and the Green Climate Fund also provide financial support for HPBs.

These financing mechanisms help offset the higher upfront costs of building HPBs, making them more affordable and promoting their wider use. By participating in carbon markets, trading energy and carbon savings, and securing green or climate funding, developers can make HPBs more financially viable while also contributing to global efforts to reduce carbon emissions

Sandhya Patil is a sustainability expert with the Indian Institute for Human Settlements (IIHS) and anchors technical assistance for ASSURE. The author does not have any financial interests vested with any company or organisation that would henefit from this article

# Topic-- > High-Performance Buildings: A Path to Sustainability\_\_\_\_



# Climate Mitigation and Adaptation

High-Performance Buildings (HPBs) play a crucial role in tackling climate challenges and urban issues.

# Design Features

Engineered for Efficiency: HPBs are designed to lower greenhouse gas emissions, reduce energy and water consumption, and decrease operational costs through climate-adaptive designs.

# 😊 Occupant Well-being

Enhanced Living: These buildings improve the well-being of their occupants, making them attractive to both businesses and individuals.



Economic Advantages: HPBs offer financial benefits, including increased property value, reduced utility expenses, and opportunities for carbon financing.

# **III** Government Support

Global Policies: Governments worldwide are implementing progressive policies and financing mechanisms to promote the adoption of HPBs, focusing on energy efficiency and carbon neutrality.

## **India's Initiatives**

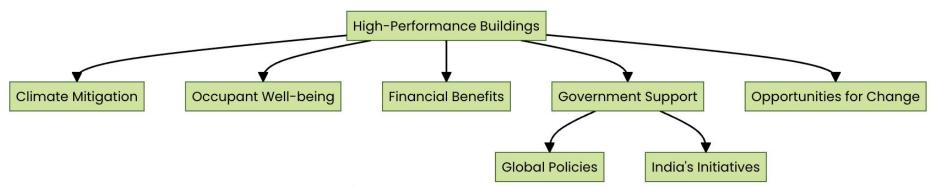
Policy Alignment: India is beginning to align its policies and business strategies to support the development of High-Performance Buildings.

# Opportunities for Change

Sustainability Transformation: The built environment presents significant\_\_\_\_\_\_opportunities for transformation towards sustainability through HPBs.



## **Conceptual Overview:**



**Summary**: High-Performance Buildings (HPBs) are essential for climate mitigation, offering environmental and financial benefits while enhancing occupant well-being, with growing support from governments globally, including India.



# **Mapping** → **Yasmina Lake**

## **Overview**

**Yasmina Lake** is a prominent feature in Morocco known for its beautiful landscape and recreational opportunities.

It has seen increased attention due to climate changes and environmental projects in the region.

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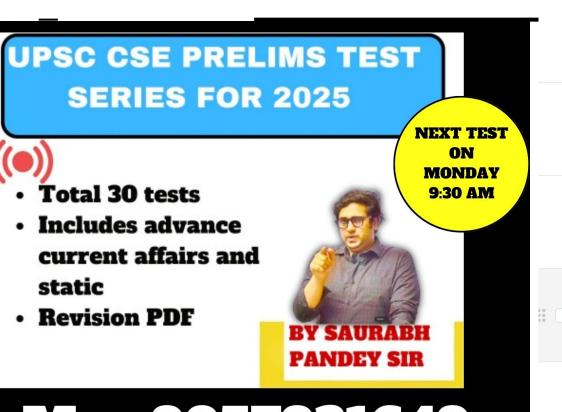
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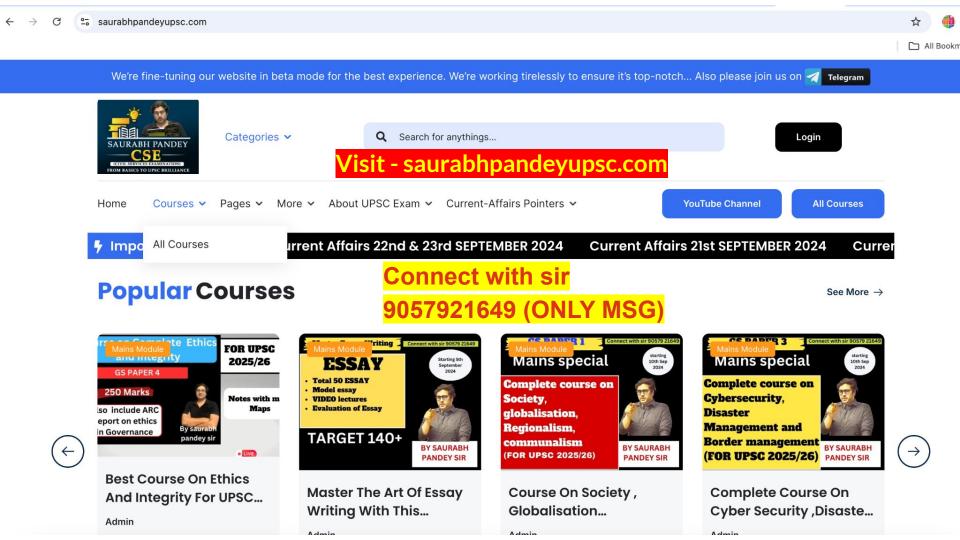


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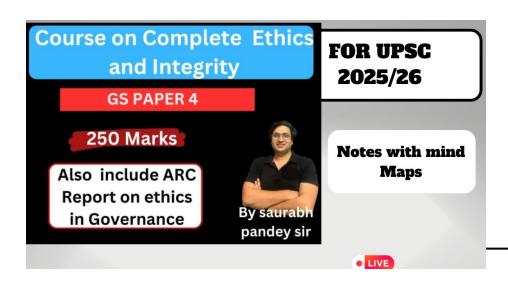
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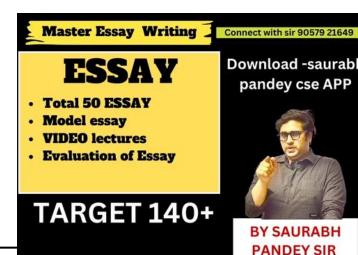
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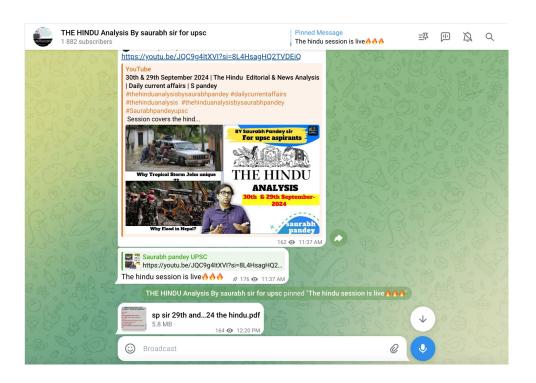


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# Target Mains -2025/26 -

Q "Shadow fleeting is a new challenge india has to face in Managing International trade". Examine

# Connect with sir 9057921649

send your answer - Saurabh pandey upsc telegram channel

