

# CURRENT AFFAIRS

WEEKLY

WEEK: 4

JULY  
2022

## MAINS

GS-II

- RIGHTFUL CHALLENGE (TWITTER ROW)
- CENTRE HAS NO NEW DATA ON CHILD LABOUR
- WHEN PARTIES CLAIM THE SAME SYMBOL & ROLE OF ECI
- PRADHAN MANTRI FASAL BIMA YOJANA (PMFBY)
- NIRF INDIA RANKINGS 2022 ANNOUNCED
- RISE IN UNVACCINATED CHILDREN IN INDIA
- MISSING ELEMENT OF POLITICAL PARTICIPATION IN THE DRAFT DISABILITY POLICY
- GOVERNMENT POINTS OUT 'DELAY' IN FRAMING LABOUR CODES
- PATNA HC EXCEEDED ITS JURISDICTION: SC

GS-III

- ARTISANAL SOAPS TO LAVENDER TEA, CHHATTISGARH'S GOBAR REVOLUTION IS HELPING RURAL WOMEN
- INDIA'S DEMOGRAPHY AT CROSSROADS: ELDERLY MAY OUTNUMBER THE YOUTH
- BRIDGING THE GAP: INDIA NEEDS TO HELP WOMEN GET GREATER ACCESS TO JOBS AND RESOURCES
- IS PROTECTIONISM COMPATIBLE WITH LIBERALIZATION?
- FISCAL DEFICIT REINED IN, CAD A CONCERN: FINANCE MINISTRY
- COSMIC CLIFFS AND DANCING GALAXIES: NASA'S JAMES WEBB TELESCOPE BEGINS NEW ERA OF ASTRONOMY
- BENEFITS OF NEW HPV VACCINE
- DATA DEMOCRACY: WHO BATS FOR PASSING ON GENOMICS TECH TO DEVELOPING WORLD
- THE DEBATE AROUND THE FOREST CONSERVATION RULES
- TAKING OFF FROM COP26: IS GREEN GRIDS INITIATIVE THE WAY FORWARD FOR INDIA?

## PRELIMS

### ART & CULTURE

- President's address on 'Dhammacakka Day 2022'
- The History behind Anayoottu: paved way from Asian Games
- Pythagorean geometry in Vedic-era texts, centuries before Pythagoras

### INTERNATIONAL RELATIONS

- Iran, Belarus to be newest SCO members
- CAATSA waiver
- I2U2 holds its first-ever leader's summit

### POLITY & GOVERNANCE

- Increase in Indians renouncing their Citizenship

### ENVIRONMENT

- Scientists uncover why urchins are moving down California's kelp forests
- India achieves clean energy targets 9 years before deadline

### SCIENCE & TECHNOLOGY

- Serum Institute of India to launch vaccine to prevent cervical cancer
- Ola unveils India's first indigenously made lithium ion-cell
- India concerned over 'Monkeypox'
- Kilo class submarine INS Sindhudhvaj decommissioned
- China to launch solar probe

## QUICK BYTES

### HISTORY (GS-I)

- Balamani Amma, grandmother of Malayalam literature

### ECONOMY

- India cuts windfall tax on Fuel exports

### SCIENCE & TECH

- First Genetically modified cowpea in Ghana

### MISCELLANEOUS

- NASA's James Webb Space Telescope facing criticism from LGBTQ community
- Prestigious J.C. Daniel Award for filmmaker K.P. Kumaran
- P.V. Sindhu wins Singapore open

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## — **Disclaimer** —

The current affairs articles are segregated from prelims and mains perspective, such separation is maintained in terms of structure of articles. Mains articles have more focus on analysis and prelims articles have more focus on facts.

However, this doesn't mean that Mains articles don't cover facts and PT articles can't have analysis. You are suggested to read all of them for all stages of examination.

# CONTENTS

**WEEK - 4 (JULY, 2022)**

<b>Section - A: MAINS CURRENT AFFAIRS</b>			
<b>Area of GS</b>		<b>Topics in News</b>	<b>Page No.</b>
GS II	POLITY & GOVERNANCE	• Rightful challenge (Twitter row)	02
		• Centre has no new data on child labour	04
		• When parties claim the same symbol & role of ECI	07
		• Pradhan Mantri Fasal Bima Yojana (PMFBY)	09
		• NIRF India Rankings 2022 announced	11
		• Rise in unvaccinated children in India	13
		• Missing element of Political participation in the draft disability policy	15
		• Government points out 'delay' in framing labour codes	17
		• Patna HC exceeded its jurisdiction: SC	19
		GS III	ECONOMY
• India's demography at crossroads: elderly may outnumber the youth	25		
• Bridging the gap: India needs to help women get greater access to jobs and resources	28		
• Is protectionism compatible with liberalization?	30		
• Fiscal Deficit reined in, CAD a concern: Finance Ministry	33		
SCIENCE & TECH	• Cosmic cliffs and dancing galaxies: NASA's James Webb telescope begins new era of astronomy		35
	• Benefits of new HPV vaccine		40
	• Data democracy: WHO bats for passing on genomics tech to developing world		42
ENVIRONMENT	• The Debate around the Forest Conservation Rules		45
	• Taking off from CoP26: Is Green Grids Initiative the way forward for India?		47
<b>Section - B: SPECIAL</b>			
<b>Topics in News</b>			<b>Page No.</b>
GS III	ECONOMY	• GST 2.0	51

## Section - C: PRELIMS CURRENT AFFAIRS

Area of GS		Topics in News	Page No.
GS I	ART & CULTURE	• President's address on 'Dhammacakka Day 2022'	55
		• The History behind Anayoottu: paved way from Asian Games	56
		• Pythagorean geometry in Vedic-era texts, centuries before Pythagoras	57
GS II	INTERNATIONAL RELATIONS	• Iran, Belarus to be newest SCO members	58
		• CAATSA waiver	59
		• I2U2 holds its first-ever leader's summit	60
	POLITY & GOVERNANCE	• Increase in Indians renouncing their Citizenship	63
GS III	ENVIRONMENT	• Scientists uncover why urchins are mowing down California's kelp forests	65
		• India achieves clean energy targets 9 years before deadline	67
	SCIENCE & TECH	• Serum Institute of India to launch vaccine to prevent cervical cancer	68
		• Ola unveils India's first indigenously made lithium ion-cell	69
		• India concerned over 'Monkeypox'	71
		• Kilo class submarine INS Sindhudhvaj decommissioned	73
		• China to launch solar probe	75
Section - D: QUICK BYTES			
Topics in News			Page No.
GS I	HISTORY	• Balamani Amma, grandmother of Malayalam literature	78
GS III	ECONOMY	• India cuts windfall tax on Fuel exports	79
	SCIENCE & TECH	• First Genetically modified cowpea in Ghana	79
MISCELLANEOUS		• NASA's James Webb Space Telescope facing criticism from LGBTQ community	80
		• Prestigious J.C. Daniel Award for filmmaker K.P. Kumaran	81
		• P.V. Sindhu wins Singapore open	82

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**SECTION: A**  
**(MAINS)**

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**CURRENT AFFAIRS**

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## RIGHTFUL CHALLENGE (TWITTER ROW)

### CONTEXT:

Recently Twitter has decided to move to the Karnataka High Court challenging the Union government's orders to block some content posted on its website.

### ◎ BACKGROUND:

- The issue began with the government issuing a "final notice" to Twitter asking it to either comply with its orders or face a slew of enforcement measures, including losing its "intermediary status" and criminal penalties for its personnel.
- **Twitter lost its intermediary status** as it does not comply with the **new IT rules** by July 4.
- The government has reportedly warned Twitter that it must comply with the latest IT Rules by July 4.
- **Twitter has sought judicial review** of some of the content that forms a part of various Blocking Orders on these grounds and requested relief from the Court to set aside these Blocking Orders.

#### What is intermediary protection?

- **Section 79 of the IT Act** protects intermediaries from being held liable for data, content, and communication that they have no personal knowledge of, shared by users through them.
- The definition of **intermediaries even covers cyber cafes**, which can be used by users to access the internet.
- The platforms could be held liable for allowing illegal use cases, but only if they did not take adequate measures to avoid such instances.

#### What does losing the protection mean?

- An intermediary can be taken to court for not following a government request even with **safe harbour**, but only with respect to that post.
- The **intermediary status and intermediary protection** are sometimes also referred to as the "safe harbour".
- However, if a platform, Twitter, in this case, does not comply with the intermediary guidelines, it loses the shield entirely, which makes them susceptible to accusations of publishing content that breaks the law.

### ◎ ANALYSIS:

**What is the bone of contestation between the microblogging platform and the Central government?**

- The **disparity in the assessment** of what constitutes 'free expression' and harm to public order among the two entities is the premise of the entire contestation.
- As all foreign intermediaries have the **right to judicial review**. Twitter filed a writ petition challenging several of the blocking orders:
  - ▶ **to set aside multiple blocking orders** of the Central government
  - ▶ to alter their directions to **identify specific violative content than imposing a blanket ban on individual accounts**
- **Reason sighted by Twitter:** According to Twitter, the blocking orders were "procedurally and substantially" non-compliant with Section 69A of the Information Technology Act (IT Act).

#### What is Section 69A of the IT Act?

- Section 69A of the IT Act empowers the government to **restrict access to any content in the interest of sovereignty and integrity of the country, security of the state**, friendly relations with foreign states or **public order**.

#### Procedure:

- The **government-designated officer** and an **examination committee** assess the content in question within **48 hours** of receiving the **takedown request**.
- It must **enable an opportunity for the author** or originator of the content to **provide clarifications**.
- The **recommendations are then sent to the Secretary of the Department of Information Technology for approval** to forward a request to the social media intermediary for restricting access.

#### Constitutional Safeguard:

- The mentioned procedure must be read under the purview of **Article 19** of the Indian Constitution guaranteeing freedom of speech and expression.
- However, **Clause 2 of the article permits** the state to impose '**reasonable restrictions**' for the same reasons as those for Section 69A.

### What kind of content has fallen under the purview of Section 69A?

- The Supreme Court in its past judgements has suggested the content must be viewed from the standards of a “**strong-minded, firm and courageous**” person.
- The assessment must not be from the standpoint of a “**weak**” and “**vacillating**” individual who may sense danger in every hostile point of view.

### What is the Twitter argument?

- The blocked content does not meet the “**threshold**” for restricting access.
- The vast majority of people who consume the content under scrutiny are **necessarily literate** and **can reasonably perceive the full context of the content**.

### Procedural issues Twitter has highlighted:

- The government is **only reproducing the words of Section 69A** as reasons for blocking URLs and accounts and has not sighted clear reasons why the restrictions were necessary in the interest of public order or for any other reason.
- It is also important to understand that **much of the content** in these URLs deemed to be fit for takedowns is **either journalistic** or of a **political nature**, or **even dissent**. For example, some of the tweets were by farmers and others during their agitations against the farm laws.
- **The government has not complied with rules under the Information Technology (IT) Act** which call for a hearing of the author of the content besides the intermediary before any takedown action.

The Supreme Court’s ruling in, *Fatehgarh vs Ram Manohar Lohia (1960)* held restrictions made in the public interest **must possess a reasonable connection to the objective being achieved**. They need to be **set aside should the co-relation be “far-fetched, hypothetical or too remote”**, in other words, bearing **no proximity to public order**.

### Users’ rights violation:

- The **blocked content** at issue does **not have any apparent proximate relationship** to the grounds under Section 69A.
- The **government failed to demonstrate** how the content is violative of **Section 69A**.
- It is a principally **disproportionate measure** and **violates the rights** of users under the Constitution, especially when the reason for blocking lacks specificity.

### Taking down the whole user account should be a last resort:

- **Ministry of Electronics and Information Technology (MeitY)**, has many times stated that if only some portion or some content is unlawful, then the platform may take proportionate action of removing such alleged information alone, and should not completely suspend the user account.

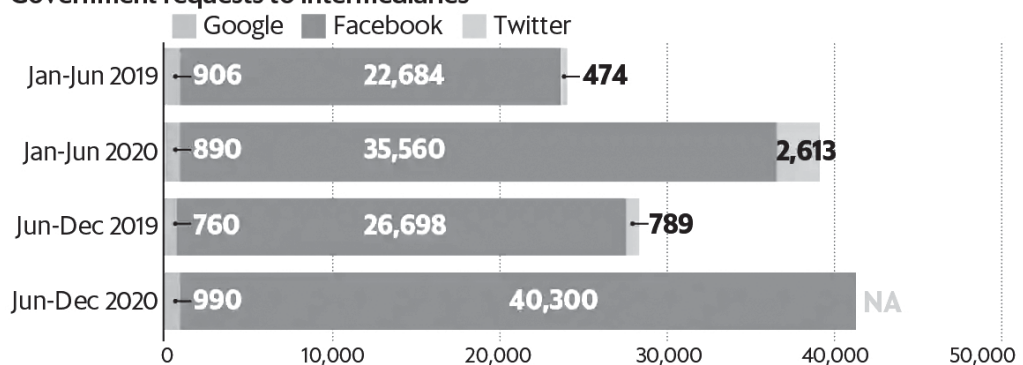
### CONCLUSION:

**Internet and telecommunications system** have come a long **privacy in the online space**.

## Increasing scrutiny

Government requests to social media platforms have been increasing not only in India but all across the world. Facebook received 191,013 government requests, including 40,300 from India, for user data in the second half of 2020.

### Government requests to intermediaries



Government requests include all legal requests for data, emergency and content takedown requests.

Source: Company transparency reports

# CENTRE HAS NO NEW DATA ON CHILD LABOUR

## CONTEXT:

The Centre does not have any data on child labour in the country and a reason for this is the drying up of budgetary provisions meant for the National Child Labour Project (NCLP) scheme.

### ◎ BACKGROUND:

- The Labour Ministry has told the **Parliament Standing Committee on Labour** that since the NCLP was merged with the **Samagra Shiksha Abhiyan in 2016**, the Ministry has no records of child labour.
- The currently available data is from the **2011 Census**, which says the **country has more than a million child labourers**.

According to data from Census 2011, the number of child labourers in India is 10.1 million of which 5.6 million are boys and 4.5 million are girls. A total of 152 million children – 64 million girls and 88 million boys – are estimated to be in child labour globally, accounting for almost one in ten of all children worldwide.

### ◎ ANALYSIS:

#### What is Child Labour?

- Child labour refers to the employment of children in any work that deprives them of their childhood, interferes with their ability to attend regular school, and is mentally, physically, socially or morally dangerous and harmful.

#### Facts to better understand child labour in India:

- 1 in 10 child labourers worldwide is from India
- Girls are the most affected
- Child labour is most prevalent in five regions (**census 2011**) namely, Bihar, Uttar Pradesh, Rajasthan, Madhya Pradesh and Maharashtra

#### Where are these child labourers deployed?

- Bonded labour, child soldiers, and trafficking.
- **Industrial labour:** In brick kilns, carpet weaving, garment making, domestic service, food and refreshment services (such as tea stalls), agriculture, fisheries and mining.
- **Sexual exploitation**
- Production of child pornography

Factors responsible for Child labour	Side-effects
<ul style="list-style-type: none"> <li>• Poverty</li> <li>• Social norms condoning them</li> <li>• Lack of decent work opportunities for adults and adolescents,</li> <li>• Migration and emergencies</li> </ul>	<ul style="list-style-type: none"> <li>• Risks of contracting occupational diseases like skin diseases, diseases of the lungs, weak eyesight, TB etc.;</li> <li>• Vulnerability to sexual exploitation at the workplace;</li> <li>• Deprived of education.</li> <li>• Threat to National Economy</li> <li>• Child labour in the informal sector</li> <li>• Disguised child labour</li> <li>• Child trafficking</li> <li>• Social inequalities and discrimination</li> </ul>

#### Constitutional Provisions for Child Upliftment-

##### Article 21 A: Right to Education

- The State shall provide free and compulsory education to all children of the age of 6 to 14 years in such manner as the State, by law, may determine.

##### Article 24: Prohibition of employment of children in factories

- No child below the age of fourteen years shall be employed in work in any factory or mine or engaged in any other hazardous employment.

##### Article 39: The State shall, in particular, direct its policy towards securing

- That the health and strength of workers, men and women, and the tender age of children are not abused and that citizens are not forced by economic necessity to enter avocations unsuited to their age or strength.



### Legal provisions and policy interventions:

- **Child Labour Act (Prohibition and Regulation) 1986:** It prohibits children under the age of 14 years to be working in hazardous industries and processes.

#### ILO core conventions related to Child Labour:

- There are eight Core Conventions of the ILO. The two Core Conventions directly related to child labour of ILO are
  - **Conventions 138** regarding admission of age to employment
  - **Convention 182** regarding worst forms of Child Labour.
- India has ratified both the Core Conventions.
- **Child Labour (Prohibition & Regulation) Amendment Act 2016:** It prohibits the employment of children below 14 years in all employment and with the provisions for the prohibition on employment of adolescents (14-18 Years) in the scheduled hazardous occupations and processes.
- The **Child Labour (Prohibition & Regulation) Amendment Rules, 2017:** The Rules provide a broad and specific framework for the prevention, prohibition, rescue and rehabilitation of child and adolescent workers. It also clarifies on issues related to help in family and family enterprises and the definition of family with respect to child, specific provisions have been incorporated into rules.
- Policy interventions such as **MGNREGA 2005**, and **Right to Education Act 2009** and **Mid-Day Meal Scheme** have paved the way for children to be in schools along with guaranteed wage employment (unskilled) for rural families.

### National Child Labour Project SCHEME:

- The government initiated the **National Child Labour Project (NCLP) Scheme** in 1988 to rehabilitate working children in **12 child labour endemic districts** of the country.
- This is the major **Central Sector Scheme** for the rehabilitation of child labour.
- The Scheme seeks to adopt a sequential approach with a focus on the rehabilitation of children working in hazardous.
- Project Societies at the district level are fully funded for the opening up of special schools/ Rehabilitation Centres for the rehabilitation of child labour.
- **The special schools/Rehabilitation Centres provide:**

- Non-formal/bridge education
- Skilled/vocational training
- Mid-Day Meal
- Stipend @ Rs.150/- per child per month.
- Health care facilities through a doctor appointed for a group of 20 schools.

At present, about 6000 special schools are in operation under the NCLP scheme. To date, more than 10 lakhs of children have been mainstreamed into the formal education system under the Scheme.

### Why role of Panchayats becomes significant to eradicate child labour?

Approximately 80% of child labourers in India have roots in rural areas. The panchayats can play a significant role in mitigating in child labour.

- Role of panchayat members in mitigating child labour
- Generate awareness about the ill effects of child labour
- Encourage parents to send their children to school
- Create an environment where children stop working and get enrolled in schools instead
- Ensure that children have sufficient facilities available in schools
- Inform industry owners about the laws prohibiting child labour and the penalties for violating these laws
- Activate Balwadis and Aanganwadis in the village so that working mothers do not leave the responsibility of younger children to their older siblings
- *Motivate Village Education Committees (VECs)* to improve the conditions of schools

**Child Development in 11th Five Year Plan 2007 to 2012:** The child development approach in the Eleventh Plan is to ensure that children do not lose their childhood because of work, disease, and despair. It is based on the understanding that the rights of all children, including those who do not face adverse circumstances, must be protected everywhere and at all times so that they do not fall out of the social security net.

### Required measures

- **Survey of child labour:** It is necessary that the government commissions research and surveys on different aspects of child labour in the country.
- **New Policy for Child Labour:** A lot of changes have been done since the child labour policy

in 1986. But a further relook of all the laws and policies is urgently needed. Consistency in the constitutional and legal provisions pertaining to children's rights is critical and required.

- **National Child Labour Programme (NCLP):** The current National Child Labour Programme (NCLP) needs to be revamped.

**Social Mobilisation:** Given that eradication of child labour is not an easy task, preventive strategies are more sustainable in the long run. The role of social mobilization and community participation is crucial.

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## WHEN PARTIES CLAIM THE SAME SYMBOL & ROLE OF ECI

### CONTEXT:

In recent times, various controversies are erupting regarding the claims of different political party over the same party symbol.

#### Election symbols and their significance:

- An **electoral or election symbol** is a standardized symbol allocated to a political party.

#### Types of Election Symbol:

- As per the **Election Symbols (Reservation and Allotment) (Amendment) Order, 2017**, party symbols are either “reserved” or “free”.
  - ▶ **Reserved:** Eight national parties and 64 state parties across the country have “reserved” symbols
  - ▶ **Free:** ECI has a pool of nearly 200 “free” symbols. These symbols are allotted to the thousands of unrecognized regional parties in the country.
- They are used by the parties during their campaigning and are shown on **Electronic Voting Machines (EVMs)**, where the voter chooses the symbol and votes for the associated party.
- The symbol of a party is one of **extreme relevance** to political survival.
- For many Indian voters who do not read, the symbol is their association with the party when they exercise their franchise. Hence, importance is given to the symbol of the party.

#### Election Commission’s powers in a dispute over the election symbol when a party splits:

- The **Election Symbols (Reservation and Allotment) Order, 1968** empowers the EC to recognize political parties and allot symbols.
- **EC can decide** disputes among rival groups or sections of a **recognized political party** staking claim to its name and symbol.
- The **EC is the only authority to decide issues** on a dispute or a merger under the order.

The Supreme Court (SC) upheld its validity in *Sadiq Ali and another vs. ECI in 1971*.

- This applies to disputes in recognized national and state parties. **However, if any of the parties is not satisfied then they can approach the courts.**

#### What happens when there is no certainty about the majority of either faction?

- **Where the party is either vertically divided** or it is not possible to say with certainty which group has a majority, the **EC may freeze the party’s symbol** and allow the groups to register themselves with new names or add prefixes or suffixes to the party’s existing names.
- The EC may take time to gather enough material to decide the question.
- For immediate electoral purposes, **it may freeze the party’s symbol and advise the groups to fight the elections with different names and on temporary symbols.**

#### Position of Judiciary on the Issue:

- Many of the cases of the split in political parties have landed in the Supreme Court. The most significant case was that of the Indian National Congress (INC) in 1969 where the Supreme Court **upheld the order of the ECI** applying the test of **majority (Sadiq Ali vs ECI, 1972)**.
- It was a milestone judgment for the Election Commission as the **apex court upheld the constitutional validity of the Election Symbols (Reservation and Allotment) Order, 1968**, giving an executive order the status of subordinate legislation.
- SC stated that **‘The Commission, in resolving this dispute, does not decide as to which group represents the party, but which group is that party.**
- The Supreme Court has, time and again, upheld the test of majority in the Symbols Order to be a *“valuable and relevant test”* to decide a dispute between rival groups within a *“democratic organization”* like a recognized political party.

#### How does Election Commission decide on party symbol disputes?

- **Approach Election Commission:** The EC cannot take *Suo moto* cognizance of such cases. It can act only when at least one party approaches it with its claim.

- **Evidence produced:** Once a claim has been raised with EC, it starts the proceedings by giving notice to the other faction to give its version. Both parties are asked to produce evidence in support of their claim, accompanied by affidavits
  - **Scrutiny by Election Commission:** The commission will scrutinize whether there are rival sections or groups of a recognized political party as claimed based on the information it possesses. If the commission is satisfied that there exist rival factions within a political party then it decides which faction is a recognized party.
  - **Test of majority:** The EC employs '*the test of the majority*' principle to decide the recognized party. The EC looks at the strength of each group, in the party's organization and the legislatures. In case EC is not able to determine the strength of rival groups based on support within the party organization, it resorts to testing the majority among elected MPs and MLAs.
  - **Binding decision:** The decision of the Commission is binding and on all such rivals' sections or groups. In 1997 the EC introduced a new rule under which while one faction got the party symbol, the other had to register itself as a separate party. The national or state party status of the new formation would be determined only based on its performance in the state or central elections after registration.
- ▶ Where the party is either vertically divided or it is not possible to say with certainty which group has a majority, the **EC may freeze the party's symbol and allow the groups to register themselves with new names** or add prefixes or suffixes to the party's existing names.
- **When rival factions are reunited in the future:**
    - If reunited, the **claimants may approach the EC again** and seek to be recognized as a unified party.
    - The EC is also empowered to recognize mergers of groups into one entity. **It may restore the symbol and name of the original party.**

#### Instances of Parties having the same symbol:

- Federal Party of Manipur and Dravida Munnetra Kazhagam (DMK) use 'Rising Sun' as their symbol.
- Bahujan Samaj Party and Asom Gana Parishad have 'Elephant' as their party symbol.
- Samajwadi Party and Jammu and Kashmir Panthers Party contest on the 'Cycle' symbol in their respective states.
- Jharkhand Mukti Morcha and Shiv Sena have 'Bow and Arrow' as their election symbol in Jharkhand and Maharashtra respectively.

#### Election Commission decision in different scenarios:

- **When there is no certainty:**

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# PRADHAN MANTRI FASAL BIMA YOJANA (PMFBY)

## CONTEXT:

Andhra Pradesh has re-joined the crop insurance scheme Pradhan Mantri Fasal Bima Yojana after having opted out in 2019-20. A few states remain out.

☐ This brief aims to analyse the current status of the scheme and issues associated with it.

## ◎ BACKGROUND:

- **Andhra Pradesh was one of six states that have stopped the implementation of the scheme over the last four years.**
- The other five, which remain out, are Bihar, Jharkhand, West Bengal, Jharkhand, and Telangana.

### Reasons for Andhra Pradesh opting out of the scheme:

#### The state had mentioned several reasons:

- that the scheme should be voluntary
- that states should be given options to choose the risks covered
- the scheme should be universal; the cut-off date for enrolment should be flexible
- the state should be given the option to use its own database of E-crop, an application used by the state government to collect information about crops

## ◎ ANALYSIS:

### About Pradhan Mantri Fasal Bima Yojana:

- The scheme was launched in 2016 and is being **administered by the Ministry of Agriculture and Farmers Welfare.**
  - ▶ At that time, 27 states and Union Territories had implemented the scheme.
- It replaced the **National Agricultural Insurance Scheme (NAIS) and Modified National Agricultural Insurance Scheme (MNAIS).**
- Pradhan Mantri Fasal Bima Yojana is the flagship scheme of the government for agricultural insurance in India in line with the **One Nation-One Scheme theme.**
- **Eligibility:** Farmers including sharecroppers and tenant farmers growing notified crops in the notified areas are eligible for coverage.

### Coverage of Crops:

- Food crops (Cereals, Millets, and Pulses)
- Oilseeds

- Annual Commercial / Annual Horticultural crops.

In addition, for perennial crops, pilots for coverage can be taken for those perennial horticultural crops for which standard methodology for yield estimation is available.

### Responsibility of the Farmers:

- Timely Information/claim lodging for damage to crops due to localized calamities and post-harvest losses.
- To ensure that the insured crop is the same as the crop sown.

### Risks covered under the scheme

- **Yield Losses** (standing crops, on a notified area basis).
  - ▶ Comprehensive risk insurance is provided to cover yield losses due to non-preventable risks, such as Natural Fire and Lightning, Storm, Hailstorm, Cyclone, Typhoon, Tempest, Hurricane, and Tornado. Risks due to Flood, Inundation, landslides, Drought, Dry spells, and Pests/ Diseases also will be covered.
- In cases where the majority of the insured farmers of a notified area, having the intent to sow/plant and incurred expenditure for the purpose, are prevented from sowing/planting the insured crop due to adverse weather conditions, shall be eligible for indemnity claims up to a maximum of 25 percent of the sum insured.
- **In post-harvest losses**, coverage will be available up to a maximum period of 14 days from harvesting for those crops which are kept in "cut & spread" condition to dry in the field.
- For certain localized problems, Loss/damage resulting from the occurrence of identified localized risks like hailstorms, landslides, and Inundation affecting isolated farms in the notified area would also be covered.

### Issues Related to the Scheme:

- **Financial Constraints of States:** The financial constraints of the state governments and low claim ratio during normal seasons are the major reasons for the non-implementation of the Scheme by these States.



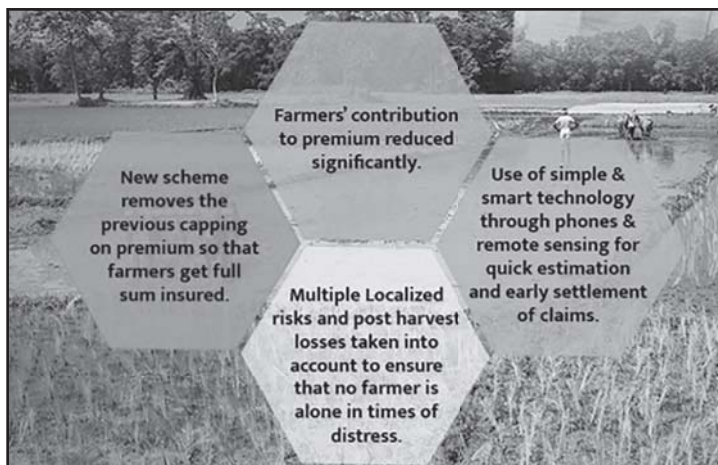
- States are unable to deal with a situation where insurance companies compensate farmers less than the premium, they have collected from them and the Centre.
- The State governments failed to release funds on time leading to delays in releasing insurance compensation.
- This defeats the very purpose of the scheme which is to provide timely financial assistance to the farming community.
- Claim Settlement Issues:** Many farmers are dissatisfied with both the level of compensation and delays in settlement.
- Implementation Issues:** Insurance companies have shown no interest in bidding for clusters that are prone to crop loss.
- Insurance companies making windfall gains:** It is said that it helps insurance companies more than the farmers. Farm leaders claim insurance

companies have made windfall gains at the behest of the public exchequer and farmers.

- Delayed pay-outs:** Delayed pay-outs and denial of claims are other common complaints against insurance companies.
- Identification Issues:** Currently the PMFBY scheme doesn't distinguish between large and small farmers and thus raises the issue of identification. Small farmers are the most vulnerable class.

### Why is Pradhan Mantri Fasal Bima Yojana being revamped?

- To make farmers self-sufficient to manage risk in agriculture production.
- To stabilize the farm income.
- To enable farmers of North-Eastern states to manage agriculture risks.
- Enable faster claims settlements through quick and accurate yield estimation.



### Restructuring of the scheme:

The revamped PMFBY is often called PMFBY 2.0, it has the following features:

- Investing in Information, Education, and Communication (IEC) activities ICE Activities:** Insurance companies have to now spend 0.5% of the total premium collected on **Information, Education, and Communication (IEC) activities**.
- Limit to Central Subsidy:** The Centre has decided to limit the PMFBY premium rates - against which it would bear 50% of the subsidy - to a maximum of 30% in un-irrigated and 25% in irrigated areas.
- The scheme is now optional for all the farmers:** Initially, the scheme was compulsory for loanee farmers; in February 2020, the Centre revised it to make it optional for all farmers. Earlier, it was compulsory for loanee farmers availing Crop Loan/Kisan Credit Card (KCC) account for notified crops.
- More Flexibility to States:** The government has

given the flexibility to states/UTs to implement PMFBY and given them the option to select any number of additional risk covers/features.

### CONCLUSION:

There is a **need for comprehensive rethinking among states** and the **central governments** to further resolve all the pending issues around the scheme so that the farmers could get benefit from this scheme. Further, rather than paying subsidies under this scheme, **the state government should invest that money in a new insurance model.**

'**Beed model is being followed**', of Maharashtra where a company assumes liability only up to 110% of the premium collected or shares gains in a good year with the State government. This model can emerge as a way out of the current mess. If the farmer is not enthused by crop insurance despite the 95-98% subsidy on premium, it means that the product per se needs improvement.

# NIRF INDIA RANKINGS 2022 ANNOUNCED

## CONTEXT:

Recently, the Ministry of Education released the India Rankings 2022 instituted by the National Institutional Ranking Framework (NIRF).

### ◎ BACKGROUND

- NIRF was approved by the Ministry of Education in September 2015.
- It is the first-ever effort by the government to rank **higher education institutions (HEIs)** in the country.
  - ▶ Before NIRF's launch in 2016, **HEIs were usually ranked by private entities**, especially news magazines.

### ◎ ANALYSIS

#### What has been found?

- Next to China and United States, India has the **third largest higher education system** in the world in terms of size and its diversity and largest in the world in terms of number of educational institutions.
- In the Indian system, **higher (tertiary) education** starts after the 10+2.
- Framework of higher education in India is very complex.
- It includes various type of institutions like universities, colleges, institutes of national importance, polytechnics etc.
- Universities are also of different types like
  - ▶ **Central universities** which are formed by government of India, by an act of parliament which are responsible for arranging and distributing resources required by university grant commission(UGC)

#### Regulatory Bodies:

- University Grant Commission (UGC)
- All India Council for Technical Education (AICTE)
- Council of Architecture (COA)
- ▶ **State universities**
- ▶ **Deemed universities (aided and unaided)**
- ▶ **Private universities**
- India has a federal set-up and the Indian constitution places education as a **concurrent responsibility** of both the centre and state.

- ▶ While the centre co-ordinates and fixed standards in higher and technical education, school education is the responsibility of state.

#### How HEIs are ranked?

- NRIF framework outlines a methodology to rank institutions across the country.
- The methodology assesses broad parameters for ranking various universities and institutions:
  - ▶ Teaching, Learning, and Resources (TLR)
  - ▶ Research and Professional Practice (RP)
  - ▶ Graduation Outcomes (GO)
  - ▶ Outreach and Inclusivity (OI)
  - ▶ Peer Perception (PR)

#### 11 Categories: The 2022 ranking is announced for 11 categories. This includes

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>● Overall</li> <li>● university</li> <li>● management</li> <li>● college</li> <li>● pharmacy</li> <li>● medical</li> <li>● engineering</li> </ul> | <ul style="list-style-type: none"> <li>● architecture</li> <li>● ARIIA (Atal Ranking of Institutions on Innovation Achievements)</li> <li>● Law</li> <li>● research institutions</li> </ul> |
|--|---|

These categories keep on changing and adding as per the requirements.

#### Highlights of India Rankings 2021:

- **The total number of institutions participating in NIRF ranking 2022 is 7,254**, up from 6,272 participants last year.
- **Overall:** IIT-Madras, IISc-Bangalore, and IIT-Bombay have emerged as the country's top three higher education institutions
- **University:** IISc, Bengaluru tops the category.
- **Research Institution:** IISc, Bengaluru was ranked the best research institution, a category included for the first time in India Rankings 2021.
- **Colleges:** Miranda College retains 1<sup>st</sup> position amongst colleges, followed by Hindu College, Delhi; Presidency College, Chennai.

- **Engineering:** Among engineering institutions, IIT-Madras remained number one.
- **Management:** Indian Institute of Management Ahmedabad was ranked one.

<ul style="list-style-type: none"> <li>• Inadequate Infrastructure and Facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate Infrastructure and Facilities</li> </ul>
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Challenges of Higher Education System	Suggestions Improving System for the
<ul style="list-style-type: none"> <li>• Gap between the Supply and demand</li> <li>• Lack of Quality Research work</li> <li>• Shortage of Faculty and High Student-Faculty Ratio</li> </ul>	<ul style="list-style-type: none"> <li>• Gap between the Supply and demand</li> <li>• Lack of Quality Research work</li> <li>• Shortage of Faculty and High Student-Faculty Ratio</li> </ul>

**Have these rankings gone international?**

- No, not yet. NIRF is in its seventh year, but it continues to only rank Indian HEIs.

**Benefits of NIRF Ranking for an Institution:**

- Improves student enrolment
- Clarity on standard of institution
- NIRF provides clarity about the standard of course delivered and the standard of education an institution provides
- Elevates the Global Ranking of the Institution

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# RISE IN UNVACCINATED CHILDREN IN INDIA

## CONTEXT:

The number of children who were unvaccinated or missed the first dose of the diphtheria-tetanus-pertussis vaccine doubled due to the pandemic, as per the latest assessment of UNICEF.

### Key-highlights of the observation

Observation in the official data published by the WHO and UNICEF:

- **Pandemic effect:** Due to the pandemic, the **number of children who were unvaccinated** or missed their first dose of the **diphtheria-tetanus-pertussis (DTP)** combined vaccine **has doubled**.
  - ▶ India was hit particularly hard as it had the highest number of such unprotected children at **nearly 3.5 million, an increase of 1.4 million from 2019**.
- This is the largest sustained decline in childhood vaccinations in approximately 30 years.
- **Zero dose children: For the first time there has been a decline in evaluated coverage in immunisation for India** as a whole due increase in **zero doses**, or those who missed their first diphtheria-tetanus-pertussis, between 2019 and 2021.
- More than 3 million of these **'zero-dose children'** in 2020 lived in India.
- Measles too remains a concern, as well as outbreaks of diseases like diphtheria which can spread quickly where people are unvaccinated.

**Positives:** A further backsliding was prevented and the number dropped to 2.7 million in 2021 due to catch-up programmes such as the **third Intensified Mission Indradhanush (IMI)**.

### Immunization Programs in India:

- **Universal Immunization Programme:**
  - ▶ The Immunization Programme in India was introduced in 1978 as 'The Expanded Programme of Immunization (EPI) by the Ministry of Health and Family Welfare.'
  - ▶ In 1985, the Programme was modified as the 'Universal Immunization Programme (UIP)'. UIP prevents mortality and morbidity in children and pregnant women against 12 vaccine-preventable diseases.

### Vaccines against preventable disease

Under UIP, immunization is providing free of cost against 12 vaccine preventable diseases:

- Nationally against 9 diseases - Diphtheria, Pertussis, Tetanus, Polio, Measles, Rubella, severe form of Childhood Tuberculosis, Hepatitis B and Meningitis & Pneumonia caused by Hemophilus Influenza type B
- Sub-nationally against 3 diseases - Rotavirus diarrhoea, Pneumococcal Pneumonia and Japanese Encephalitis; of which Rotavirus vaccine and Pneumococcal Conjugate vaccine are in process of expansion while JE vaccine is provided only in endemic districts.

- ▶ **Universal Immunization Programme (UIP)** is one of the largest public health programmes targeting close to 2.67 crore newborns and 2.9 crore pregnant women annually.
- ▶ It is one of the most cost-effective public health interventions and is largely responsible for the reduction of vaccine-preventable under-5 mortality rate.
- ▶ To accelerate the coverage, **Mission Indradhanush** was envisaged and implemented in 2015 to rapidly increase the full immunization coverage to 90%.

### New vaccines

- **Inactivated Polio Vaccine (IPV):** IPV has been introduced in UIP as part of Global Polio end-game strategy, to mitigate the risk associated with tOPV to bOPV switch.
- **Rotavirus vaccine (RVV):** RVV has been introduced to reduce mortality and morbidity caused by Rotavirus diarrhoea in March 2016.
- **Measles Rubella (MR) vaccine:** India is committed to the goal of measles elimination and rubella control and to achieve the goal MR vaccine was introduced in the country through a campaign mode in a phased manner in 2017.

- **Pneumococcal Conjugate Vaccine (PCV):** PCV has been launched in May 2017 for reducing Infant mortality and morbidity caused by pneumococcal pneumonia.
- **Tetanus and adult diphtheria (Td) vaccine:** TT vaccine has been replaced with Td vaccine in UIP to limit the waning immunity against diphtheria in older age groups.

- Intensified Mission Indradhanush 4.0:
  - ▶ **The aim is to fully immunize children who were either unvaccinated or partially vaccinated under UIP.**
  - ▶ It will ensure that **Routine Immunization (RI)** services reach unvaccinated and partially vaccinated children and pregnant women. **Children up to two years will be covered in this drive.**

- Until the pandemic, India steadily improved immunization coverage from 43% during the National Family Health Survey (NFHS) -3 (2005-2006), to 62% in the (NFHS) -4 between 2015 and 2016 and the (NFHS)-5 between 2019 and 2021.
- **IMI 4.0** will immensely contribute to filling the gaps and making lasting gains toward universal immunisation.

#### ◎ **CONCERNS:**

- **This is a red alert for child health.** The world is witnessing the largest sustained drop in childhood immunisation in a generation.
- The fall in immunisation coverage is worrying as it is being accompanied by a **rapidly rising rate of severe acute malnutrition** due to a **fall in income levels during the pandemic.**

A malnourished child already has weakened immunity and missed vaccinations make him **vulnerable to common childhood illnesses.**

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# MISSING ELEMENT OF POLITICAL PARTICIPATION IN THE DRAFT DISABILITY POLICY

## CONTEXT:

The Department of Empowerment of Person with Disabilities (DoEPwD) recently released the draft of the national policy for persons with disabilities.

### ◎ BACKGROUND

- In 2006, India adopted its **first National Policy on Disability**.
- In line with its obligation to harmonise all of its laws and policies with the **UN Convention on the Rights of Persons with Disabilities (CRPD)**, India constituted a committee in 2019, which finalised the draft policy in October 2021.

### Assessing good and bad points

Good points	Misses
<ul style="list-style-type: none"> <li>• Ensuring disabled people are not called more than twice for disability certification to offices</li> <li>• Sign language interpreters at district hospitals</li> <li>• Training in disability rights as disability competencies (only for medical personnel)</li> <li>• dedicated sports centres</li> <li>• Making cinema halls, museums and tourist places accessible to disabled people</li> <li>• Guidelines to modify personal vehicles</li> <li>• Maintaining data regarding crimes against disabled people</li> <li>• Indigenisation of motorised wheelchairs</li> <li>• Maintaining year-wise data of employees with disabilities</li> </ul>	<ul style="list-style-type: none"> <li>• lacks inter-ministerial coordination</li> <li>• does not provide pathways to mandate health professionals to acquire the right medical diagnostic equipment</li> <li>• does little to ensure that accessibility requirements are included in public procurement laws and policies for goods and services</li> <li>• The policy is silent on repealing all types of guardianship that affect deafblind people and persons with intellectual or psychosocial disabilities.</li> <li>• Lack of way forward to provide high-support needs; prohibit insurance-based discrimination; and a national suicide prevention strategy</li> </ul>

### What is the need for a new policy?

- India is a **signatory** to the **United Nations Convention on Rights of Persons with Disabilities** requires a policy change.
- Enactment of new disability legislation (**Rights of Persons with Disabilities Act 2016**) which increased the number of disabilities has been **increased from the existing 7 to 21** and it authorized the Central Government to add more types of disabilities.
- Also, India being a party to the Incheon Strategy for Asian and Pacific Decade of Persons with Disabilities, 2013-2022 ("Incheon commitment"), a few changes were required.

### Incheon Strategy

- Incheon Strategy was **prepared under the aegis of the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP)**.
- The Incheon Declaration was adopted on 21 May 2015 at the World Education Forum (WEF 2015) held in Incheon, Republic of Korea.
- **Incheon Strategy identifies 10 goals for Asia-Pacific countries** to ensure the inclusion and the empowerment of persons with disabilities and conformity with the Sustainable Development Goals 2030.
- It aims at mobilizing all countries and partners around a **stainable Development Goal (SDG)** on education and its targets,

### The issue of lack of political participation

- There is a glaring omission in the absence of any commitment to the political uplift of persons with disabilities.
- The inaccessibility of the voting process, barriers to participation in party politics, or a lack of representation at the local, state, or national levels have all aggravated the marginalization of the disabled.
  - ▶ It has changed the discourse around disability by **shifting the focus from the individual to society**, i.e., from a medical model of disability to a social or human rights model of disability.

- ▶ The documents fail to take cognizance of such mandates such as provided in the **Rights of Persons with Disabilities Act 2016** which is committed to the anti-discrimination of differently-abled people.
- ▶ The exclusion of disabled people from the political space happens at all levels of the political process in the country, and in different ways. **India does not have any policy commitment** that is aimed at enhancing the political participation of disabled people.

### Inadequate Representation:

- Disabled people are not represented enough at all three levels of governance.
- The lack of rigorous and comparable data and statistics further hinders the inclusion of persons with disabilities.
- The first visually disabled Member of Parliament in independent India, **Sadhan Gupta**, hardly finds mention in our political or disability discourse.
- We have often failed to acknowledge disabled political personalities.

### About political participation:

- **Article 29** of the **Convention on Rights of Persons with Disabilities** mandates that state parties should “ensure that persons with disabilities can effectively and fully participate in political and public life on an equal basis with others, directly or through freely chosen representatives.
- The **Incheon goals** also promote participation in political processes and in decision-making.
- **The Rights of Persons with Disabilities Act 2016:** The anti-discrimination commitment under this Act recognizes the political domain wherein disabled people should be allowed to realize their human rights and fundamental freedoms.

### Measures taken by the government for the disabled community:

- Rashtriya Vayoshri Yojana: For providing Physical Aids and Assisted-living Devices for Senior citizens belonging to the BPL category.
- Scheme for Implementation of Persons with Disabilities act (SIPDA): To provide financial assistance to the states for the implementation of the act.

- Accessible India Campaign: To help make buildings and other infrastructure disabled-friendly.
- Assistance to Disabled Persons for Purchase/Fitting of Aids and Appliances (ADIP) Scheme: provides for the distribution of aids and assistive devices.
- Sugamya Pustakalaya: Online library for persons with disabilities.
- National Action Plan for Skill development aims to cover 2.5 million persons with disabilities by the year 2022 through various stakeholders.
- Deendayal Disabled Rehabilitation Scheme: Promote Voluntary Action by releasing grant-in aid to NGOs.

### Make Functional Rights:

- Inclusiveness and empowerment of the disabled cannot be achieved without political inclusion.
- **The policy can follow a four-pronged approach:**
  - ▶ building the capacity of disabled people’s organizations and ‘empowering their members through training in the electoral system, government structure, and basic organizational and advocacy skills;
  - ▶ the creation, amendment, or removal of legal and regulatory frameworks by lawmakers and election bodies to encourage the political participation of the disabled;
  - ▶ inclusion of civil societies to ‘conduct domestic election observation or voter education campaigns;
  - ▶ and a framework for political parties to ‘conduct a meaningful outreach to persons with disabilities when creating election campaign strategies and developing policy positions

### Constitutional Provisions:

- Article 41 of the Directive Principles of State Policy (DPSP) states that State shall make effective provisions for securing the right to work, to education, and to public assistance in cases of unemployment, old age, sickness, and disablement, within the limits of its economic capacity and development.
- The subject of ‘relief of the disabled and unemployable’ is specified in the state list of the Seventh Schedule of the constitution

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# GOVERNMENT POINTS OUT 'DELAY' IN FRAMING LABOUR CODES

## CONTEXT

Recently, Government said that only a few States have not yet framed the rules. According to a recent report, 24 States have so far published draft rules for all four codes.

## ◎ ABOUT

### Reasons behind the delay

- The government says the **delay in implementing the four labour codes is due to the delay in framing rules by the States.**
- The States are publishing draft rules and inviting comments from stakeholders on those draft rules.
- The Centre had also published draft rules for certain sections of the four codes.

### Labour Code:

- A labour code is **a codification of labour laws in legislative form.**
- One of the **first labour codes was first introduced in 1918 in the Russian Soviet Federative Socialist Republic**, as a legal framework underlying the requirement to ensure the right to work declared in the first Soviet Constitution.
- **All Passed bills but have not been implemented yet by the government:**
  - ▶ The Code on Wages (August 2019)
  - ▶ The Industrial Relations Code
  - ▶ The Code on Social Security
  - ▶ The Code of Occupational Safety
  - ▶ Health and Working Conditions

### Background (Labour Codes)

- There are **more than 50 crore workers in the organized and unorganized sectors of the country.**
- A majority of these workers i.e. around **90 percent are in the unorganized sector.**
- Through these four Labour Codes, it has been ensured that all these workers will get the benefit of Labour Laws.
- Now **all workers of the organized and unorganized sectors will get the minimum wages** and a large section of workers in the unorganized sector would also get social security.

### Recommendation:

- The **Second National Commission of Labour** submitted its report in 2002 which said that there was a multiplicity of Labour Laws in India and therefore, recommended that at the **Central level multiple Labour Laws should be codified in 4 or 5 Labour Codes.**

### New 4 Labour Codes are beneficial for all

- **Wage Code 2019:** All workers have got the Right to Minimum Wages.
- **Social Security Code 2020:** To ensure security for all workers, the Central Government has amalgamated 9 Labour Laws into the Social Security Code in order to secure the right of workers for insurance, pension, gratuity, maternity benefit, etc.
- **OSH Code (Occupational, Safety, Health, and Working Conditions Code) 2020:** For providing a better and safe environment along with occupational health and safety to workers at the workplace.
- **Industrial Relations (IR) Code, 2020:** The Central Government has taken steps for safeguarding the interests of Trade Unions as well as the workers. In this Code, all possible steps have been taken for industrial units and workers so that disputes do not arise in the future.

### Benefits of Codification:

- Single Registration
- Single License
- Single Statement
- Minimum Forms
- Common definitions
- Reduction of Committees
- Web-based surprise inspection
- Use of technology – Electronic registration and licensing.
- Reduction of compliance cost disputes

### Concern:

- The employers' associations like the Confederation of Indian Industry (CII) and Federation of Indian

Chambers of Commerce and Industry (FICCI) had expressed reservation on the proposal for increasing the minimum wages and expanding the social security network by involving the employers too.

- The employers are worried that a further increase in the salary bill will hamper their profits in a recession-hit economy.

◎ **CONCLUSION:**

The empowerment of workers is necessary for an empowered, prosperous, and Aatmanirbhar India.

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# PATNA HC EXCEEDED ITS JURISDICTION: SC

## CONTEXT:

Patna HC exceeded jurisdiction by summoning Sahara group chief Subrata Roy in an anticipatory bail case, says Supreme Court.

### What is the issue?

- The Supreme Court held that it is not open for High Courts to implead third parties in the exercise of powers under **Section 438 of the Code of Criminal Procedure**, the provision that deals with anticipatory bail.
- The court's examination of a bail plea should be confined to the facts of the particular case and not wander into other areas.
- According to the view of the Supreme Court, it is **impermissible and cannot be countenanced**.

### Types of Bail in India:

- **Regular Bail:** It is a direction given by the Court (any Court within the country) to release a person who is already under arrest and kept in police custody. For such Bail, a person can file an application under Sections 437 and 439 of the CrPC.
- **Interim Bail:** Bail granted for a temporary and short period by the Court till the application seeking Anticipatory Bail or Regular Bail is pending before a Court.

- **Anticipatory Bail:** A direction issued to release a person on Bail even before the person is arrested. In this situation, there is an apprehension of arrest and the person is not arrested before the Bail is granted. For such Bail, a person can file an application under Sec. 438 of the Code of Criminal Procedure (CrPC). It is issued only by the Sessions Court and High Court.

### Who can apply for an Anticipatory Bail?

- Any Indian citizen **accused of a cognizable or non-cognizable offense** and **expecting arrest** can **approach a Sessions Court or High Court** to get an Anticipatory Bail.
- Generally, people apply for Anticipatory Bails when they believe that they have been falsely implicated in a case or have been subject to trumped-up charges and might get arrested.
- The rules concerning Anticipatory Bail are governed by *Section 438(1) of the Criminal Procedure Code*. If the Court sees merit in the application, it may direct the concerned authorities to release the applicant on bail in the event of an arrest.

### Cognizable Offences:

- A cognizable offense is an offense in which the police officer under any other law for the time being in force, can arrest the convict without a warrant and can start an investigation without the permission of the court.
- Cognizable offenses are generally heinous or serious in nature such as murder, rape, kidnapping, theft, dowry death, etc. The first information report (FIR) is registered only in cognizable crimes.

### Non-cognizable Offences:

- A non-cognizable offense is the offense listed under the Indian Penal Code and is bailable in nature. In the case of a non-cognizable offense, the police cannot arrest the accused without a warrant as well as cannot start an investigation without the permission of the court. The crimes of forgery, cheating, defamation, public nuisance, etc., fall in the category of non-cognizable crimes.

### What Is Jurisdiction?

- Jurisdiction can be defined as the **limit of a judicial authority** or the extent to which a court of law can exercise its authority over suits, cases, appeals, etc.
- The **rationale** behind introducing the concept of jurisdiction in law is that a court should be able to try and adjudicate only in those matters with which it has some connection or which fall within the geographical or political or pecuniary limits of its authority.

In 1921 Calcutta High Court judgment (**Hriday Nath Roy v. Ram Chandra**) sought to explain the meaning of the term 'jurisdiction' in great detail.

- the power to hear and determine issues of law and fact
- the authority to hear and decide a legal controversy

- the power to hear and determine the subject matter in controversy between parties to a suit
- the power to hear, determine and pronounce judgment on the issues before the Court
- the power or authority which is conferred upon a Court by the Legislature to hear 'the power to enquire into the facts, to apply the law, to pronounce the judgment and to carry it into execution

### Types of Jurisdictions:

In India, there are mainly 5 types of jurisdictions which can be classified as follows:

- **Subject-matter jurisdiction:** It can be defined as the authority vested in a court of law to try and hear cases of a particular type and pertaining to a particular subject matter. For example, District Forums established under the Consumer Protection Act, 1986 have jurisdiction over only consumer-related cases. It cannot try criminal cases.
- **Territorial jurisdiction:** Under this type of jurisdiction, the geographical limits of a court's authority are delineated and specified. It cannot exercise authority beyond that territorial/geographical limit.

### Some of the other types of jurisdictions include:

- **Concurrent jurisdiction:** A situation in which more than one court of law has the jurisdiction to try certain matters. Sometimes, this type of jurisdiction is also referred to as 'co-ordinate jurisdiction'.
- **Admiralty jurisdiction:** Jurisdiction pertaining to mercantile and maritime law and cases.
- **Probate jurisdiction:** Matters concerning the administration of an estate belonging to a dead person and its guardianship come under probate jurisdiction. For example, cases involving the administration and execution of the will of a deceased person.
- **Summary jurisdiction:** It refers to the authority of a court to try matters in accordance with the summary procedure. Such cases take the form of summary trials in order to speedily resolve a dispute.
- **Pecuniary jurisdiction:** Pecuniary means 'related to money. Pecuniary jurisdiction tries to address whether a court of law can try cases and suits of the monetary value/amount of the case or suit in question. For example, consumer courts have different pecuniary jurisdictions. A district forum can try cases of value up to Twenty lakh rupees only.

- **Original jurisdiction:** It refers to the authority of a court to take cognizance of cases that can be tried and adjudicated upon in those courts in the first instance itself. It is different from appellate jurisdiction in the sense that in the case of the latter, the courts rehear and review an already decided matter whereas in the case of the former the cases are tried for the very first time.
- **Appellate jurisdiction:** It refers to the authority of a court to rehear or review a case that has already been decided by a lower court. Appellate jurisdiction is generally vested in higher courts. In India, both the High Courts and the Supreme Court have appellate jurisdiction to hear matters which are brought in the form of appeal before them. They can either overrule the judgment of the lower court or uphold it. At times they can also modify the sentence.

### Lack of jurisdiction and irregular exercise of jurisdiction:

- Whenever the suit is made before the court the initial issue is to decide whether the court has jurisdiction to deal with the matter. **If the court has all the three territorial, pecuniary, or subject matter jurisdictions then simply the court has the power to deal with any of the cases.**
- If the court does not have any of jurisdiction, then it will be recognized as a lack of jurisdiction and irregular exercise of jurisdiction.
- When the court does not have jurisdiction to decide the case then such a decision will be regarded as void or voidable depending upon the circumstances.

### The basis to determine jurisdiction is determined mainly on the grounds of:

- Fiscal value
- Geographical boundaries of a court
- The subject matter of court

### JURISDICTION OF HIGH COURT:

#### Original jurisdiction of High Court:

- The Constitution of India does not give a detailed description of the original jurisdiction of the High Court.
  - ▶ It is accepted that the original jurisdiction of a High Court is exercised by the issue of Writs to any person or authority including the Government.
- **Article 226 of the Constitution** vests in the High Court the power to issue writs for the restoration of fundamental rights and also in cases of other legal rights.



- ▶ This power of the High Court does not derogate the similar power conferred on the Supreme Court in Article 32 of the Constitution.
- The original jurisdiction of the High Court also extends to the matters of admiralty, probate, matrimonial, and contempt of court cases.
- The High Courts have also full powers to make rules to regulate their business in relation to the administration of justice. It can punish for its own contempt.
- High Courts have been given original jurisdiction over cases arising out of Parliament or state legislature elections.

#### **Appellate Jurisdiction of High Court:**

- The appellate jurisdiction of the High Court extends to both civil and criminal cases.

- In civil cases, its jurisdiction extends to cases tried by Courts of Munsifs and District judges.
- In the criminal cases, it extends to cases decided by Sessions and Additional Sessions Judges.

#### **Scope of Jurisdiction of High courts in the matters of anticipatory bail:**

- The **scope of inquiry of the High Court is quite narrow** in an anticipatory bail application under Section 438 Cr. P.C
- The **application is limited to the concerned applicant** and the offense registered against them, the Court's inquiry ought to be restricted to the facts relevant to the applicant before the court.
- **Any inquiry into matters pertaining to third parties, especially when it is beyond the scope of the complaint, is impermissible.**

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# ARTISANAL SOAPS TO LAVENDER TEA, CHHATTISGARH'S GOBAR REVOLUTION IS HELPING RURAL WOMEN

## CONTEXT:

Chhattisgarh's flagship economic model, that started as cow dung procurement & organic fertiliser production scheme in 2020 is helping state give rural economy and women empowerment, a push.

### ◎ BACKGROUND

- Chhattisgarh's flagship economic model began as a cow dung procurement and organic fertiliser production scheme in 2020.
- The state government aimed at **providing income support to farmers**, while also addressing a shortage of chemical fertilisers in the state.
- The model is currently in its third phase, which is pushing self-help groups (SHGs) involved in the scheme towards entrepreneurship
  - ▶ The first two phases were procuring cow dung and setting up cattle-care centres — called gauthans — and their expansion into rural industrial parks.

- This scheme was awarded the **Elets Innovations Award** at the national level in 2022 in the category of innovation in agriculture.
- It received the '**Skoch Gold Award**' for its outstanding contribution to environmental protection and sustainable development in 2022.

- In this mission, rural women associated with the state's SHGs are at the forefront.

### ◎ ANALYSIS:

#### Chhattisgarh's '*gobar* (cow dung) economy'.

(Figure on next page)

#### Different Phases of the Scheme

**1st Phase - 'Godhan Nyay Yojana'** - Under the scheme,

- Gauthan Samitis will procure cow dung at Rs 2 per kilogram from livestock owners and use it to prepare organic fertilizers
- Women self-help groups will repurpose procured cow dung into vermicompost and other eco-friendly items
- Cooperative societies will sell vermicompost at

Rs. 8/- per kg to the farmers to promote organic farming

- ▶ This is much cheaper than chemical fertilisers, priced at Rs 48 to 50 a kg.
- ▶ Distribution of vermin-compost fertilizer to farmers will be done as a commodity loan by cooperative societies, and banks

#### How the Godhan Nyay Yojana is helping the rural economy?

- This is a part of the larger perspective of going back to villages, reviving the rural economy and generating sustainable rural livelihood, as 80 per cent of the state's population lived in villages.
- helping **generate additional income and increase employment opportunities, especially for women**
- preventing open grazing and straying of cattle on streets
- encouraging use of organic fertilisers and minimise use of chemical ones
- helping enhance fertility of crops and availability of chemical fertilizers, which will further enhance the nutrition level of crops
- with protection of crops and reduced cost of cultivation, it is helping increase acreage
- encouraging dairy and animal husbandry and increasing milk production
- Plans are also afoot to diversify the cow dung product range by manufacturing items like paint, phenyl and gau kasht (cow-dung log, used in funerals).
- **Enhancing confidence:** Getting women into the public space is important. It affects their confidence and their psychology.

#### 2nd phase - Chhattisgarh Gauthan Nirman Scheme:

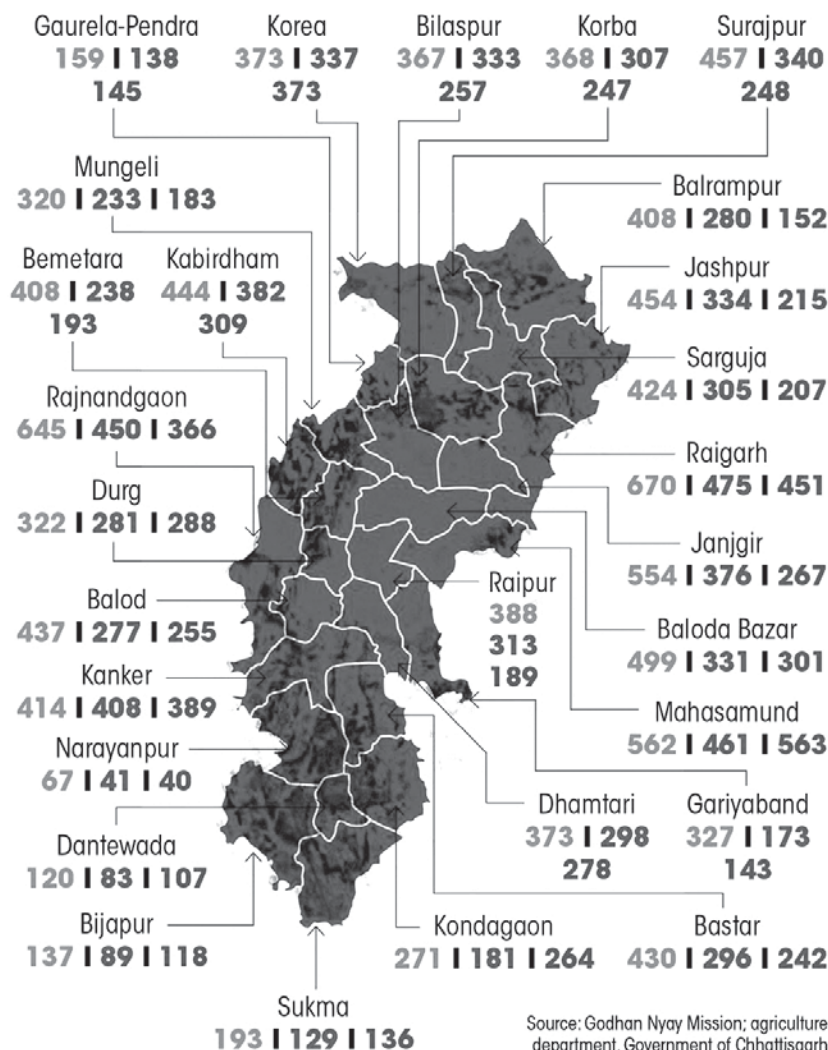
- Gauthans have been constructed under Narva, Garwa, Ghurva, Bari (NGGB) scheme
- **gauthans** are sheds where cattle could be kept for the day and looked after

## COLLECTION NETWORK

Chhattisgarh operates 7,889 cow shelters (*gauthan*) that buy dung at ₹2 per kg and use it to manufacture compost, pots, electricity

00 Approved *gauthans*: 10,591      00 Completed *gauthans*: 7,889

00 *Gauthans* with cow dung purchase facility: 6,926



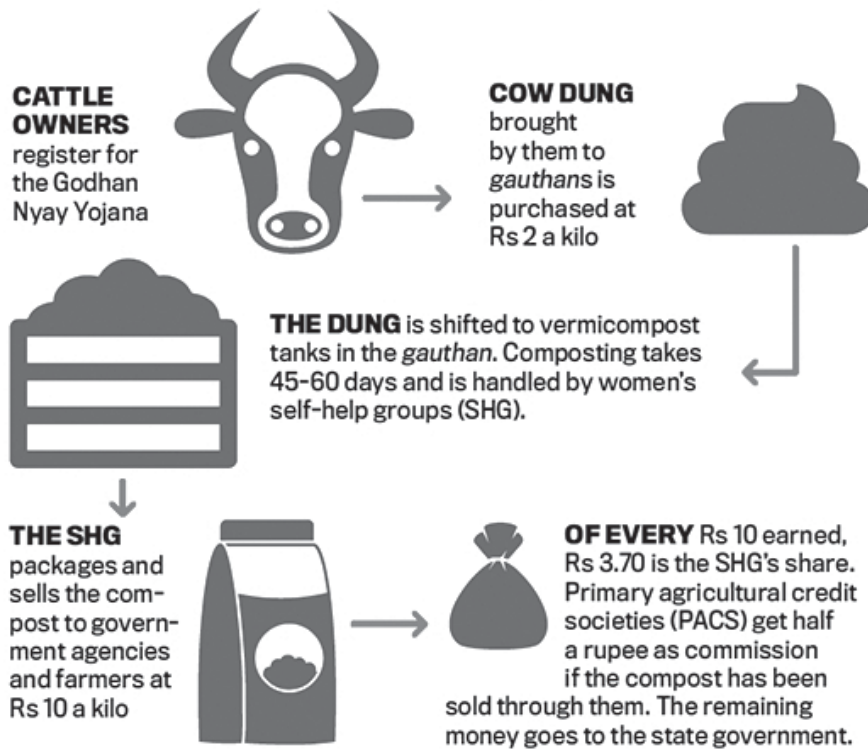
- The cow dung collected here would then be sold to the government
  - ▶ These *gauthans* gradually started housing vermicompost pits
- Employees included women from SHGs in the villages in which the *gauthans* were located.
- Various activities like poultry farming, broom making, idol making work are being carried out under one roof along with the sale of compost manure
- *Gauthans* produce raw materials, like herbal extracts, which are then used in making things like soaps and perfumes.

- While some women have started their own businesses at the *gauthans*, others work for a fixed wage that the SHGs payout.
- On average, the *gauthans* provide eight hours of fixed daily work to about 30-40 women in the villages where they're set up

According to the government policy, the land and infrastructure for the setting up of the *gauthan* come from the local gram panchayat, which buys the land and then ensures that it has adequate water supply, sheds for cows, pits for vermicompost etc.

- The state administration plays a crucial role in terms of first identifying a strip of land large enough to serve its purpose.

## COW DUNG TO COMPOST



## THE SPIN-OFFS

The state government claims multiple benefits of the scheme

- Financial empowerment of women since only women's SHGs are engaged in dung procurement and sale
- Economic benefits for OBCs, SCs and STs as most cattle owners belong to these communities
- *Gauthans* to boost rural industry as they are being developed to support other economic activities, such as vegetable cultivation and rearing fish and poultry. Cow dung product diversification is also in the pipeline—paint, phenyl, dung log for funerals, bricks, etc.
- With hundreds of thousands of cattle confined to *gauthans*, fewer stray animals raiding farms or squatting on roads
- Improved cattle breed as fertile cows at *gauthans* are inseminated with Gir and Sahiwal stock

- District officials convince gram panchayats to use monetary grants and other funds to set up the *gauthans*
- Government figures peg the number of operational *gauthans* in Chhattisgarh at approximately 8,400.

### 3rd Phase - Rural Industrial Park

The state government is now in the process of transforming these *gauthans* into 'rural industrial parks', or centres for cottage industries that the government hopes will create retail products that can "compete with the market"

The aim is to increase economic activities in rural

areas and empower the rural populace to create avenues of income for themselves

- A rural industrial park is essentially a large area that is expected to house cow sheds, vermicompost pits, and infrastructure for cottage industries like vegetable farming, perfume-making, pisciculture, poultry-farming, textile work, and more.
- It is meant to be like a **co-working space for women** in SHGs who want to run their own businesses.
- The parks are also supposed to be centres where **villagers can be trained in the skills required to run such businesses and create such products.**

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# INDIA'S DEMOGRAPHY AT CROSSROADS: ELDERLY MAY OUTNUMBER THE YOUTH

## CONTEXT:

Ministry of Statistics and Programme Implementation has released 'Youth in India 2022' report.

### ◎ BACKGROUND:

- After the new economic policy in 1991, India had experienced a demographic transition with increasing share of young age population.
- The story of demographic dividend, where the young age population serves as the spine of the economy, continues till 2016.
- Report from UN World Population Prospects has cited that India will outnumber China in the next year, attaining the first place in the size of population.
- The window of demographic dividend is on closing phase as, India is experiencing a downward trend in the share of young age population and rise in old age population.

### ◎ ANALYSIS:

#### Key Highlights of the 'Youth in India 2022' report:

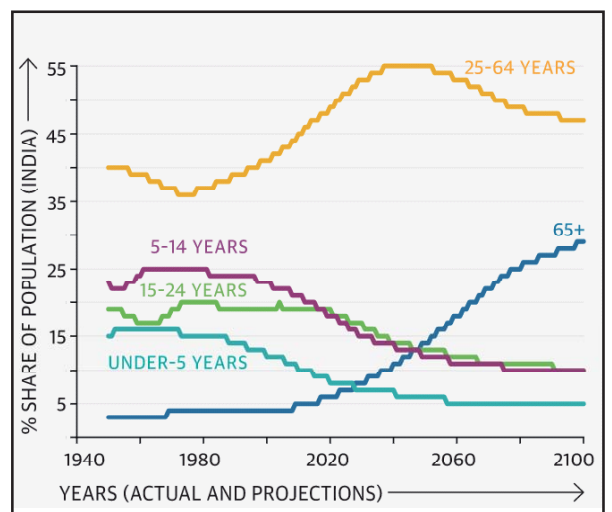
- The number of young people is expected to increase initially but start to decline in the second half of the 2011-2036 period.
- Youth in the 15-29 age group will make up 27.2 percent of the population in 2021, which is expected to decrease to 22.7 percent by 2036.
- The more populous states of Bihar and Uttar Pradesh, which saw an increase in the proportion of the youth population to the total population by 2021, are expected to decline.
- States like Kerala, Tamil Nadu and Himachal Pradesh are expected to see a higher number of elderly people than young people by 2036.

#### Definition of Youth:

- No universal definition: There is no universal definition of youth, various departments and organisations provide their own definitions.

Definitions from various institutions:

Organisations/ Institutions	Age Group
UN Secretariat/UNESCO/ILO/WHO/ UNFPA	15-24
UN Habitat (Youth Fund)	15-32
UNICEF	Under 18
African Youth Charter	15-35
National Youth Policy, 2014	15-29



#### What are the major concerns highlighted in the Youth India Report 2022?

- Declining young population:** The proportion of youth to population has increased from 26.6% in 1991 to 27.9% in 2016, and projected to begin a declining trend reaching to 22.7% till 2036.
- Increasing old aged population:** The old aged population has increased from 6.8% in 1991 to 9.2% in 2016, and expected to increase touch 14.9% in 2036
- Demographic transition:** India's window for demographic dividend is closing as the share of the youth population is on a declining trend and the share of the old aged population is increasing.
- Demographic disaster:** Demographic dividend with appropriate education and skill development, increasing the risk of demographic disaster.



- **Increasing dependency ratio:** Rising old aged population will increase nation's dependency ratio.
- **Decline in national savings:** Increased dependency ratio will create a negative impact on the position of national savings.
- **Impact on investment:** Declined national savings reduces the investment capacity of the nation.
- **Demand for health care:** A greater proportion of youth at present will result in a greater proportion of elderly in the population in future, creating a demand for better healthcare facilities.
- **Social security:** Increased old aged population will put pressure on social security and the public welfare system.

'Youth in India 2022' REPORT			
State/Union Territory	% of youth in total population of State/UT		
	2021	2031	2036
Bihar	28.8	27.7	25.5
Himachal Pradesh	25.1	21.4	19.5
Kerala	22.1	20	19.2

Madhya Pradesh	27.7	25.3	24.7
Maharashtra	26.1	22.5	21
Rajasthan	28.7	25.8	24.6
Tamil Nadu	23.2	20.4	19.1
Uttar Pradesh	29.9	26.3	25.1
India	27.2	24.1	22.7

Source: Youth in India 2022 Report, MoSPI Report of the Technical Group on Population Projections for India and States 2011-2023, Ministry of Health & Family Welfare, 2020

### What are the major issues with India's population?

- **Education and population growth:** Poverty and illiteracy have been subjected to high population growth.
- **Unemployment:** High youth unemployment serves as the catalyst in the process of transforming demographic dividend into demographic disaster.
- **Resource scarcity:** India with 2% of world's total landmass accommodates around 17% of world's total population, putting an additional pressure on resource allocation and availability.

### NYP-2014: Objectives and Priority Areas

#### Objectives

Create a productive workforce that can make a sustainable contribution to India's economic development

Develop a strong and healthy generation equipped to take on future challenges

Instil social values and promote community service to build national ownership

Facilitate participation and civic engagement at all levels of governance

Support youth at risk and create equitable opportunity for all disadvantaged and marginalized youth

#### Priority Areas

- Education
- Employment and Skill Development
- Entrepreneurship

- Health and Healthy lifestyle
- Sports

- Promotion of social values
- Community engagement

- Participation in politics and governance
- Youth engagement

- Inclusion
- Social Justice

- **Fast growth:** A mismatch in the death rate and birth rate contributing to faster growth rate.

#### What measures can be taken?

- **Productive job creation:** Creation of more productive jobs can help to utilize the demographic dividend.
- **Expansion of manufacturing sector:** Manufacturing sector needs to foster to create more opportunities for jobs and employment.
- **Universal Health care facilities:** More numbers of old population need robust health care facilities.
- **Sustainable Social security measures:** Increasing number of old aged population will demand for better social security.
- **Implementation of labour codes** and active labour market policies needs to be adopted.
- **Revision in National Youth Policy** on a regular interval.

#### India's Schemes and Policies for Older Persons:

- Schemes
  - ▶ **Pradhan Mantri Vaya Vandana Scheme** - 2017 by the Ministry of Finance

- ▶ **Indira Gandhi National Old Age Pension Scheme (IGNOAPS)** - 1995 by the Ministry of Rural Development
- ▶ **National Programme for the Health Care of Elderly (NPHCE)** - 2010-11 by the Ministry of Health & Family Welfare
- ▶ **Varishta Mediclaim Policy** - 2006 - by the National Insurance Company
- ▶ **Rashtriya Vayoshri Yojana** - 2017 - by the Ministry of Social Justice and Empowerment
- ▶ **Varishta Pension Bima Yojana** - 2003 and 2014 - by the Ministry of Finance
- ▶ **Senior Citizens' Welfare Fund** - 2015 - by the Ministry of Social Justice and Empowerment
- ▶ **Vayoshreshtha Samman** - 2005 - by the Ministry of Social Justice & Empowerment
- ▶ **Reverse Mortgage Scheme** - 2007 - by the Ministry of Finance
- ▶ **Pradhan Mantri Jan Arogya Yojana** - 2018 - by the Ministry of Health and Family Welfare

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# BRIDGING THE GAP: INDIA NEEDS TO HELP WOMEN GET GREATER ACCESS TO JOBS AND RESOURCES

## CONTEXT:

India has got another opportunity to do much better for half of its population with the Global Gender Gap Index for 2022, released by the World Economic Forum, placing it at 135 out of 146 countries

## ANALYSIS:

### About Gender Gap Index:

- Published by: World Economic Forum (WEF) since the year 2006.

### About Global Gender Gap:

- The global gender gap was closed by 68.1%, meaning that at the current rate of progress it will take 132 years to reach full parity.
- Due to the widespread stagnation of gender parity scores, South Asia will take the longest (197 years) to close the gender gap.

### Key Findings of the report:

- India ranks poorly among its neighbors, behind Bangladesh, Nepal, Sri Lanka, Maldives and Bhutan.
- Only Iran, Pakistan and Afghanistan fare worse than India in the region.
- In 2022, against a backdrop of pandemic, war and economic crisis, the global gender gap has narrowed by 68.1%, meaning that at the current rate of progress it will take 132 years to reach full parity.
- Of all regions, South Asia will take the longest to reach the target - 197 years - "due to widespread stagnation in the region's gender parity scores".
- Objectives:** to track the performance and progress of the nation towards narrowing down the gaps between genders.
- Parameters:** It benchmarks the current state and evolution of gender parity across four key dimensions:
  - Political Empowerment
  - Economic Participation and opportunity
  - Educational attainment
  - Health and survival

### Status of women in India:

- In the years of the pandemic, when incomes were shrinking, Indian women faced obstacles on all fronts, from food, health and education for girls to employment.
- The latest NFHS data (2019-2021) shows that 57% of women (age group 15-49) are anemic (up from 53% in 2015-16).
- Although the number of women using a bank or savings account has increased to 78.6%, with schemes like the **Pradhan Mantri Jan Dhan Yojana**, their participation in the labor market has decreased.
- According to data from the Center for Monitoring the Indian Economy (CMIE), around 15% of women were employed or seeking employment in 2016-17; this further reduced to 9.2% in 2021-22.

### What is the status of India according to the report?

- India ranks poorly among its neighbors, behind **Bangladesh, Nepal, Sri Lanka, Maldives and Bhutan**.
- Only Iran, Pakistan and Afghanistan fare worse than India in the region.
- India fared worst in at least one of the parameters - "health and survival", in which it ranked last.

Sub-Indices	Rank	Score
Political empowerment	48	0.267
Economic Participation and opportunity	143	0.350
Educational Attainment	107	0.961
Health and survival	146	0.937

### What are the factors contributing to the poor performance?

- There are enough numbers from the country to indicate that India, with a female population of around 66 million, has faltered on the road to gender equality.





- In the years of the pandemic, when incomes were shrinking, women faced obstacles on all fronts, from food, health and education for girls to employment.
- The latest NFHS data (2019-2021) shows that 57% of women (age group 15-49) are anemic, up from 53% in 2015-16;
  - ▶ Although 88.7% of married women participate in key household decisions, only 25.4% of women aged 15-49 who worked in the last 12 months (2019-2021) were paid in cash.
- The number of women who have a bank account or a savings account they use has increased to 78.6%, helped by schemes like the Pradhan Mantri Jan Dhan Yojana, but women's labor force participation has dwindled.
- According to data from the Center for Monitoring the Indian Economy (CMIE), around 15% of women were employed or seeking employment in 2016-17; this metric dropped to 9.2% in 2021-22.

### What needs to be done to achieve gender parity?

- **Improve representation:**
  - ▶ An exception needs to be made for the Women's Reservation Act, 2008 to be passed in Parliament.
  - ▶ Although pending, political parties should start nominating women for one-third of the seats.
- **Gender Responsive Innovation:**
  - ▶ A renewed emphasis on innovation, which focuses on a gender-sensitive approach to the innovation process, the promotion of innovation by women, the promotion of innovation for the disadvantaged, and so on.
- **PPP partnership:**
  - ▶ Promote public-private partnerships in this area, as well as recognize businesses that contribute to national gender parity goals.
  - ▶ Embrace healthy public-private partnerships to support women in business and bring technology to help innovate processes, solutions and products to increase their economic participation.
- **Implement the numerous schemes announced in true spirit:**

- ▶ The government can start spending the allocated budgets in full and hold district collectors accountable with metrics similar to the Aspiring Districts initiative. (The Nirbhaya Fund was severely underutilized.)
- ▶ Time to upgrade "Beti-Bachao-Beti-Padhao" to "Beti-Padhao-Beti-Kamao".
- ▶ Budding India needs to develop schemes to build an ecosystem for women entrepreneurs to thrive.
- **Independent body for gender parity:**
  - ▶ Create an independent authority like UIDAI for gender parity that can be a nodal agency for scaling up at district levels with clear goals, metrics, targets and good governance.
  - ▶ It can cover many areas such as education, skills, security, transparency of participation in the informal sector in the labor market, wage parity and business opportunities for women.
- **Easy availability of credit:**
  - ▶ Data consistently supports the fact that women with financial literacy support are more disciplined in repaying their microloans.
  - ▶ Perhaps India Post could replace for-profit microfinance and provide better credit to women entrepreneurs.
- **Adoption of government initiatives and policies:**
  - ▶ Businesses need to take government initiatives and should adopt inclusion policies that help women advance in their careers, through upskilling and "career return" programs, flexible working, special leave, pay parity, hybrid work models, etc.
- **CSR funds for women-oriented work:**
  - ▶ Channel CSR funds more strategically towards local women's community engagement and skills. This could be in collaboration with district administrations.
  - ▶ Lobby the government to add women-specific work to its core CSR focus.

### ◎ CONCLUSION:

The best way to improve India's abysmal ranking is to do it right by women. Both government and business owe it to the "other (better) half" for their contribution to the \$5 trillion economic mission. To this end, it is essential to increase the representation of women in leadership positions at all levels so that women have better access to jobs and resources. It is up to the government to overcome tokenism and help women overcome overwhelming economic and social barriers.

# IS PROTECTIONISM COMPATIBLE WITH LIBERALIZATION?

## CONTEXT:

The government plans to liberalize the Indian economy. However, with policies like Atmanirbhar Bharat, the government seems to be protecting the domestic economy from foreign competition. This raises questions about whether the government's external protectionism is compatible with its promise to liberalize India's economy.

## ◎ BACKGROUND:

- In the last few years, India has seen an average 5% increase in average tariff rates.
- Important economists have pointed out that India raised import duties on more than 3,200 goods from most favored nations, signalling a protectionist stance to protect domestic industries.
- The central government claims to be liberalizing India's economy, but its external economic policy-making has been marked by growing protectionism.
- With policies like Atmanirbhar Bharat, there seems to be a conscious effort to protect the domestic economy from foreign competition.
- However, on the same side, the government has rightly come up with draft laws and policies that encourage exports of products from India (**Foreign Trade Policy 2015-2020** and the recent re-establishment of the **US-India Trade Policy Forum**) and encourage the establishment of production and assembly lines (**Production Linked Incentive Scheme or PLI**) in the country itself.



## ◎ ANALYSIS:

### What is Protectionism?

- **Protectionism** refers to government policies that limit international commerce in order to benefit home companies and stimulate domestic investment in a particular industry.

- Protectionist policies are typically intended to boost domestic economic activity, but they can also be enacted to address safety or quality problems.

### Protectionist policies followed by India:

- Aatmanirbhar Bharat
- Increase in tariffs
- Anti-Dumping duty
- Food protectionism
- Vaccine nationalization
- Opting out from RCEP

### Why India needs Protectionism?

- **National Security:** The argument concerns the risk of dependence on other countries for economic sustainability.

### Tools of Protectionism

- Tariffs
- Quotas
- Subsidies
- Anti-dumping duties

- **Infant Industry:** It is argued that protectionist policies are required to protect industries in their initial stages. As if the market is kept open, global incumbents can capture it. This may lead to the end of domestic players in the new industry.
- **Dumping:** Many countries dump their goods (sell them for less than their cost of production or their cost in the local market) in other countries.
- **Saving jobs:** It is argued that more domestic purchases will lead to increased national output and that this increased output will in turn lead to a healthier domestic labor market.
- **Outsourcing:** it is common practice for companies to identify countries that have cheaper labor and simpler management systems and outsource their work.

- **Intellectual property protection:** Patents in the domestic system protect innovators. However, on a global scale, it is quite common for developing countries to copy new technologies through reverse engineering.

**What are the consequences of protectionism?**

Advantages	Disadvantages
<ul style="list-style-type: none"> <li>• More Growth Opportunities</li> <li>• Lower Imports</li> <li>• More Jobs</li> <li>• Higher GDP</li> </ul>	<ul style="list-style-type: none"> <li>• Stagnation in technological advancement</li> <li>• Limited choices for consumers</li> <li>• Inflationary effect</li> <li>• Economic isolation</li> <li>• Uncompetitive domestic industries</li> <li>• Against WTO norms</li> <li>• Impact on trade agreements</li> </ul>

Protectionist measures around the globe:
<ul style="list-style-type: none"> <li>• The rise of nationalist sentiment with America First and Brexit.</li> <li>• Vaccination nationalism displayed by developed countries during the pandemic.</li> <li>• Stopping WTO negotiations and undermining the importance of the WTO as a world trade organization.</li> <li>• Trade wars between global powers.</li> </ul>

**What are the major issues related to present protectionist policies in India?**

- **Focus on manufacturing in India rather than efficiency:**
  - ▶ Atmanirbhar Bharat is steeped in protectionism and there is a long list of sectors in which the government has resorted to import substitution which encourages domestic production.
  - ▶ The concern is that efforts are not being made to improve efficiency to make these industries globally competitive.
  - ▶ The focus is on manufacturing in India rather than efficiency.
- **Policy of Protectionism by Policy Makers:**
  - ▶ Policy makers intervene in deciding which sectors India will be good at, but in reality a market economy knows how to discover these things.

- ▶ When tariffs are reduced, firms in India that are users of these goods become more competitive. Hence, exports from India are increasing due to cheapening of raw materials.
- ▶ Here, one person's output is another person's input.
- ▶ Politicians cannot say what they should support. That is why we must remove the obstacles to globalization.
- **The Centre's external protectionism is a reflection of its domestic economic policy:**
  - ▶ China and other Southeast Asian countries attract foreign investment due to their investor-friendly environment.
  - ▶ On the other hand, investors do not invest in India for the long term, even though it is said to have the most investor-friendly policies.
  - ▶ So ease of doing business is a major concern in India. External and domestic reforms must go hand in hand.
- **Discretionary Government Policy on behalf of Atmanirbhar Bharat:**
  - ▶ This carries with it the risk of possible favoring of interest groups.
  - ▶ Industrial policy requires a high level of knowledge, forecasting ability and intellectual capacity in government.
  - ▶ Policy should be developed by government and industry through a process of dialogue. This has been the reason for the success of many Southeast Asian countries. They didn't just let the market do what it wanted. There has been serious involvement of industry or market forces along with government.
  - ▶ Government must play an important role as a facilitator.
- **Over reliance on market forces:**
  - ▶ For most of the past 30 years, India has relied solely on market forces, leaving the most productive sectors behind.
  - ▶ At a time when the economy was exposed to foreign competition, a lack of depth was found in various sectors across all areas.
  - ▶ To overcome this, the government needs to hear what the players on the ground need and respond accordingly.
- **Lack of freedom of choice for consumers who want to buy products from abroad:**
  - ▶ The Indian consumer should be able to buy foreign goods if they are cheaper and better.
  - ▶ The government should not stand in the middle and interfere with an Indian consumer's ability to buy something from abroad, or an Indian firm's ability to buy something from abroad, or an engineering firm's ability to raise capital from a cheaper source abroad. .

- ▶ In a market economy there must be freedom of choice and ad hoc protectionism is not really the way forward.
- **Declining competitiveness of Indian industry:**
  - ▶ Due to these protectionist policies, the Indian economy suffers from a lack of competitiveness.
  - ▶ If the situation continues, it will be difficult to keep macroeconomic fundamentals in check.

**How protectionism Impact the liberalization process?**

- **Restricting the trade flow:** The protectionist measures restrict the trade flow between the nations.
- **Barrier to capital mobility:** Restrictions on the trade flow creates a barrier to the movement of capital.
- **Technological stagnation:** The capital movement ensures technological advancement in various developing nations in line with developed nations.
- **Reduces the comparative advantage:** The trade between two nations takes place on the basis of the comparative advantage that nations enjoy subjected to the availability of the resource. Restrictions on trade flow reduce the optimal utilization of available resources.
- **Gains from trade:** If the countries are not efficiently optimizing the available resources the gains from trade will be negatively impacted.
- **Trade agreements:** Restrictive trade measures have a negative influence over the bilateral and multilateral agreements.
- **Economic isolation:** Restrictive measures also prohibit the country to collaborate with the global economy and put the nation at isolated position.

- **Against ease of doing business:** There is still high red-tapism in India. Moreover, India also lags behind its counterparts in most productive sectors. All this leads to a decline in the competitiveness of Indian industry.
- **Limit consumer benefits:** The government stands in the middle and interferes with an Indian consumer's ability to buy something from abroad, or an Indian firm's ability to buy something from abroad, or an engineering firm's ability to raise capital from a cheaper source abroad, and so on. This raises the fundamental question of consumer freedom.
- **Industrial Licensing Era Policy:** Policies such as the PLI provide incentives for certain capacities. In this case, the government determines the minimum economic scale and then directs the industry to produce along those lines.
- Government has to be a facilitator.
- Ensuring and expanding the right to choice for consumers.
- Participation and consulting the stakeholders in the trade related legislations.

Major challenges India faces to protect its domestic industries	What should be done?
<ul style="list-style-type: none"> <li>• <b>Inefficient:</b> The focus is on manufacturing in India rather than efficiency.</li> <li>• <b>Failure to foresee the future:</b></li> </ul>	<ul style="list-style-type: none"> <li>• Reducing the custom duty and protectionism.</li> <li>• External and domestic reforms should be on a same and parallel pace.</li> </ul>

◎ **CONCLUSION:**

We need to identify important bottlenecks that prevent India from participating in global supply chains and a world of globalized manufacturing. The industry needs to identify the pain points and the government should address these issues. A regulatory system in which Indian and foreign companies have equal political support is desirable. Therefore, a strong partnership between government and industry is necessary while removing all barriers to globalization.

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# FISCAL DEFICIT REINED IN, CAD A CONCERN: FINANCE MINISTRY

## CONTEXT:

The finance ministry cautioned the re-emergence of the twin deficit problem in the economy, with higher commodity prices and rising subsidy burden leading to an increase in both fiscal deficit and current account deficit.

## ◎ BACKGROUND:

- In the backdrop of the pandemic and international crisis the world is facing a distinct possibility of stagflation, with supply chain remained unchanged.
- India, however, is at low risk of stagflation, owing to its prudent stabilization policies.
- Increased socio-economic inequality has induced the government more to spend on the subsidy schemes widening the fiscal deficit of the government.
- In the recovery phase, central banks of various nations have opted for the tightening of the monetary policy led to out flow of foreign currency from the Indian market, depreciating the India domestic currency.
- Cumulatively the India is facing a situation of deficit in both fiscal part of the government and current account part of the balance of payment.

## ◎ ANALYSIS:

### What is Twin Deficit Problem?

- **Twin Deficit Problem:** The situation of high fiscal deficit along with current account deficit is termed as twin deficit problem.
- The situation of high fiscal deficit arises, when the expenditure of the government is much higher than the revenue collection.
- When the import volume of the nation dominates over the export volume at a higher degree, resulting into a disruption in balance of payment termed as current account deficit.

### Why this problem has arisen?

- **High subsidy:** The rising subsidy bills of the governments have increased the revenue expenditure of the government and widened the revenue deficit.
- **Reduction in revenue collection:** Reduction in the excise duty on oil and natural gas and

cut on import duty have impacted the revenue collection.

### Global Liquidity Tapering:

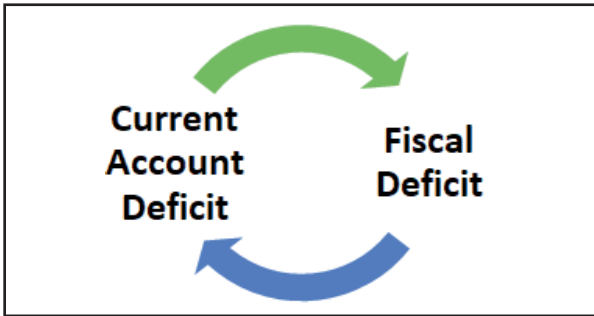
- Tight monetary policy by the central banks of various nations is termed as global liquidity tapering to curb the rising inflation at the global level.
- Tight monetary policy leads to increase in cost of funds, thus leading to out flow of foreign investment from the Indian market.
- **Rising fuel prices:** The fuel prices in the international market are increasing due to middle crisis and Ukraine war, inducing cost push inflation and increasing the government's expenditure on subsidy schemes.
- **Out flow of foreign currency:** Global liquidity tapering had led to outflow of foreign funds from the Indian market, lowering the value of rupee.
- **Skewed trade balance:** The trade balance is the net export of a nation in terms of goods, which remains negative for India since liberalization.
- Costlier imports due to rupee depreciation.

### What are the concerns associated with the problem?

- **Increasing government expenditure:** Costlier imports and rise in fuel price increases the cost of production, leading to imported inflation, which again invokes the government to spend more on the subsidies, widening the fiscal deficit.
- **Outflow of foreign currency:** High Fiscal deficit of the government creates mistrust among the foreign investors, which results into reduction in foreign investment and out flow of foreign currency.
- **Rupee depreciation:** Out flow of currency increases the value of foreign currency with respect to domestic currency 'Rupee'.
- **Rise in import bills:** Currency depreciation increases the burden of import bills.
- **Imported inflation:** Increase in global oil prices

in the international market results into rise in domestic price level of the commodities.

- **Vicious cycle:** Fiscal deficit and current account deficit are correlated to each other in a vicious process; fiscal deficit has the potential to influence high current account deficit and vice-versa.



**How this problem can be resolved?**

- **Rationalising the expenditure:** Government should rationalize the revenue expenditure to narrow down the deficit.
- **Increasing capital expenditure:** Expenditure on the capital budget will provide a sustainable solution to the problem, by increasing the employment opportunity and asset creation in the economy.

- **Rationalization of taxation:** Taxation policy should be rationalized and tax base must widen up to support the expenditure of the government.
- **Reduction in non-essential imports:** Non-essential imports needs to be reduced to bring down the burden of import bills.
- **Indigenization of consumer goods:** Government should promote Indian goods under the idea of 'Aatmanirbhar Bharat'.
- **Increasing export capacity:** Making the Indian industries more export competitive in the international market will help to narrow down the current account deficit.

◎ **CONCLUSION:**

The health crisis and the contemporary changes in the world politics have disrupted supply chain and increased the chances of imported inflation for India. India's policy measures have prevented the situation of stagflation the world is likely to face, but the increasing government burden on the subsidy schemes and import bills have arisen a problem of twin deficit which needs to be countered to maintain its sovereign credibility. More impetus should be given on capital expenditure and policies promoting the increasing the export competitiveness.

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# COSMIC CLIFFS AND DANCING GALAXIES: NASA'S JAMES WEBB TELESCOPE BEGINS NEW ERA OF ASTRONOMY

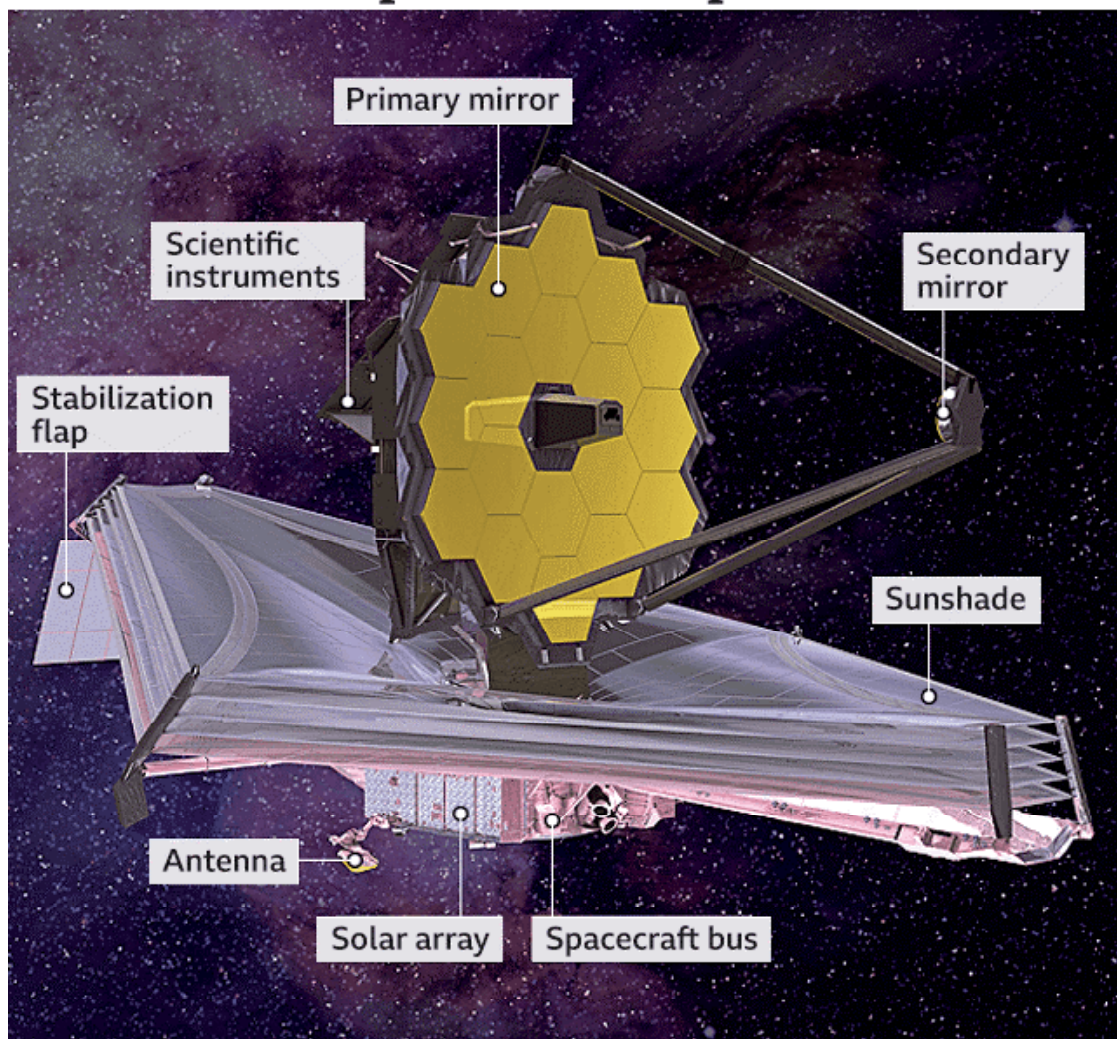
## CONTEXT:

NASA releases four more images taken by James Webb Space Telescope after deep field image of SMACS 0723 shared earlier.

### About James Webb:

- It is the **most powerful infrared telescope** of National Aeronautics and Space Administration (NASA).
- It is also considered a **successor of the Hubble Telescope** and will extend and complement its discoveries.
- JSWT will observe in **near-infrared light** rather than light in the visible part of the spectrum (unlike Hubble) and thus it will have a much greater capacity to see obscure stars and galaxies
- **Collaboration:** It is a joint venture of **NASA** (US), **ESA** (Europe), and **CSA** (Canada)
- Webb was formerly known as **the "Next Generation Space Telescope" (NGST)** and it was renamed in 2002 after a former NASA administrator, James Webb.

## James Webb Space Telescope



Source: Nasa

BBC

**IMAGES RELEASED BY JWST TILL DATE:**

NASA revealed images of the following targets:

- JWST's first image- SMACS 0723
- Carina Nebula
- WASP-96 b (spectrum data)
- Southern Ring Nebula
- Stephen's Quintet.

**JWST's FIRST IMAGE- SMACS 0723**

- NASA's James Webb Space Telescope has delivered the deepest and sharpest infrared image of the distant universe so far. Webb's First Deep Field is galaxy cluster **SMACS 0723**.
- Webb's image **covers a patch of sky approximately the size of a grain** of sand held at arm's length by someone on the ground – and reveals thousands of galaxies in a tiny sliver of vast universe.
- Webb's sharp near-infrared view brought out faint structures in extremely distant galaxies, offering the most detailed view of the early universe to date.
- Some of the cosmic objects in the image are **pictured as they were 13.1 billion years ago**.
- Webb **took 4 days to create the image**, compared to the ten days taken by Hubble for a lower-resolution image.
- The telescope's NIRCам has **brought distant galaxies into sharp focus**, letting us see tiny, faint structures that have never been seen before, including star clusters and diffuse features.

**WASP-96B-****About-**

- WASP-96b, a **massive planet located nearly 1,150 light-years** away from Earth.
- Discovered in 2014, the **gas giant has half the mass of Jupiter** and **orbits its star every three to four days**, meaning that it has **super-hot surface temperatures**.
- WASP-96b is almost entirely **cloud-free** and scientists predict that it has an **abundance of Sodium**.

**WHAT JWST REVEALED?**

The **spectrum data** of **WASP-96B** revealed the **presence of water vapour** on the distant exoplanet for the first time.

**SIGNIFICANCE:**

- This is the **first and most detailed** near-infrared transmission spectrum of an exoplanet atmosphere captured to date.
- It **reveals wavelengths** that haven't been revealed before.
- The spectrum **reveals tell-tale signatures** of water vapour on the planet.
- WASP-96B is **closer to its star** than Mercury is to our sun.
- This wavelength **spectrum is very sensitive** to water as well as key life molecules like oxygen, methane and carbon dioxide. (these molecules could be explored in future)



**EIGHT-BURST NEBULA:****About-**

- It is also known as the **Southern Ring Nebula or NGC 3132**. It is a well-known planetary nebula in the constellation Vela, located approximately 2,500 light-years from Earth.
- **Planetary nebulae** have **nothing** to do with planets. They are the shells of gas and dust ejected from dying stars.

**WHAT JWST REVEALED:**

- Webb's powerful infrared view brings this **nebula's second star** into full view, along with exceptional structures created as the stars shape the gas and dust around them.
- The images also reveal a cache of distant galaxies in the background. Most of the multi-coloured points of light seen here **are galaxies – not stars**.
- The **dimmer star at the centre** of this scene has been sending out rings of gas and dust in all directions for thousands of years, and Webb has revealed for **the first time** that this star is cloaked in dust.
- Webb's infrared images feature **new details in the complex system of the stars – and their layers of light** which are prominent in the image **from Webb's Near-Infrared Camera (NIRCam)**
- While the image from **Webb's Mid-Infrared Instrument (MIRI)** shows for the **first time** that the **second star is surrounded by dust**.
- The brighter star is at an earlier stage of its evolution and will probably eject its own planetary nebula in the future.

**SIGNIFICANCE:**

- New details like these, from the late stages of a star's life, will help us better understand how stars evolve and transform their environments.
- Webb will allow astronomers to dig into many more specifics about planetary nebulae like this one – clouds of gas and dust expelled by dying stars.
- Understanding which molecules are present, and where they lie throughout the shells of gas and dust, will help researchers refine their knowledge of these objects.

**Stephan's Quintet-****About-**

- Stephan's Quintet, a **visual grouping of five galaxies**, is best known for being prominently featured in the holiday classic film, "**It's a Wonderful Life**."
- The five galaxies of Stephan's Quintet are also known as the **Hickson Compact Group 92 (HCG 92)**.
- Although called a "quintet," **only four of the galaxies are truly close together** and caught up in a cosmic dance.
- The **fifth and leftmost galaxy, called NGC 7320**, is well in the foreground compared with the other four.
- NGC 7320 resides **40 million light-years from Earth**, while the other four galaxies (NGC 7317, NGC 7318A, NGC 7318B, and NGC 7319) are about **290 million light-years away**.



#### WHAT JWST REVEALED:

- The image is an **enormous mosaic** of Stephan's Quintet and the **largest image** taken by Webb to date. (covering about one-fifth of the Moon's diameter)
- It **covers over 150 million pixels** and is constructed **from 1,000 separate image files**.
- It provides new insights into how galactic interactions may have driven galaxy evolution in the early universe.
- Webb captures huge shock waves as one of the galaxies, NGC 7318B, smashes through the cluster.

#### SIGNIFICANCE:

- Studying such 'nearby' galaxies like these helps scientists better understand the dynamics in a more distant universe.
- It provides astronomers a ringside seat for witnessing the merging and interactions between galaxies that are so crucial to all of galaxy evolution.
- Stephan's Quintet is a fantastic "laboratory" for studying these processes fundamental to all galaxies.
- Combined with the most detailed infrared image ever of Stephan's Quintet from MIRI and the Near-Infrared Camera (NIRCam), the **data from Webb will provide a bounty of valuable, new information**.
- **For example**, it will help scientists understand the rate at which supermassive black holes feed and grow.
- Webb also sees star-forming regions much more directly, and it is able to examine emission from the dust – a level of detail impossible to obtain until now.

#### CARINA NEBULA

##### About-

- It is a **large, complex area** of bright and dark nebulosity in the constellation Carina, located in the Carina-Sagittarius Arm of the Milky Way galaxy.
- Carina Nebula is home to the Keyhole Nebula and the active, unstable supergiant star called Eta Carinae.
- The nebula is approximately 7500 light years away from Earth.

**NGC 3324** was first catalogued by **James Dunlop in 1826**. Visible from the Southern Hemisphere, it is located at the northwest corner of the Carina Nebula (NGC 3372), which resides in the constellation Carina.

**WHAT JWST REVEALED:**

- This is the last and final image released by NASA shows a **star-forming region** in the Carina Nebula called **NGC 3324**, and its **"mountains"** and **"valleys"** speckled with glittering stars.
- **Captured in infrared for the first time** by Webb, the new image **shows previously invisible areas** of star birth called as Cosmic Cliffs.
- The image **resembles craggy mountains** on a moonlit evening.
- Actually, it is the **edge of the giant gaseous cavity** within the region of the nebula and some of the **tallest "peaks"** in the nebula are **around 7 light-years high**.
- The **cavernous area (cavity)** in the image was carved from the nebula by the intense ultraviolet radiation and stellar winds from extremely hot young stars located in the centre of this **"bubble,"**
- These observations of NGC 3324 will shed light on the **process of star formation**.
- **Star birth propagates over time**, triggered by the expansion of the eroding cavity. As the bright, ionized rim moves into the nebula, it slowly pushes into the gas and dust. If the rim encounters any unstable material, the increased pressure will trigger the material to collapse and form new stars.

**SIGNIFICANCE:**

- Webb **will address** some of the **great, open questions of modern astrophysics: What determines the number of stars that form in a certain region? Why do stars form with a certain mass?**
- Webb will **also reveal the impact of star formation** on the evolution of gigantic clouds of gas and dust.
- Up to this point, scientists have had very little data **about the influence of the multitude of young and more energetic low-mass stars.**
- **With Webb, they will be able to obtain a full census of their number** and impact throughout the nebula.

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## BENEFITS OF NEW HPV VACCINE

### CONTEXT:

India in the next few months will have an indigenously developed human papilloma virus (HPV) vaccine “Cervavac” that will offer protection against cervical cancer, the second largest killer among cancers in women.

#### What is human papillomavirus infection?

- Human papillomavirus (HPV) is a **viral infection** that is passed between people through **skin-to-skin contact**.
- HPV is the most common **sexually transmitted infection (STI)**.

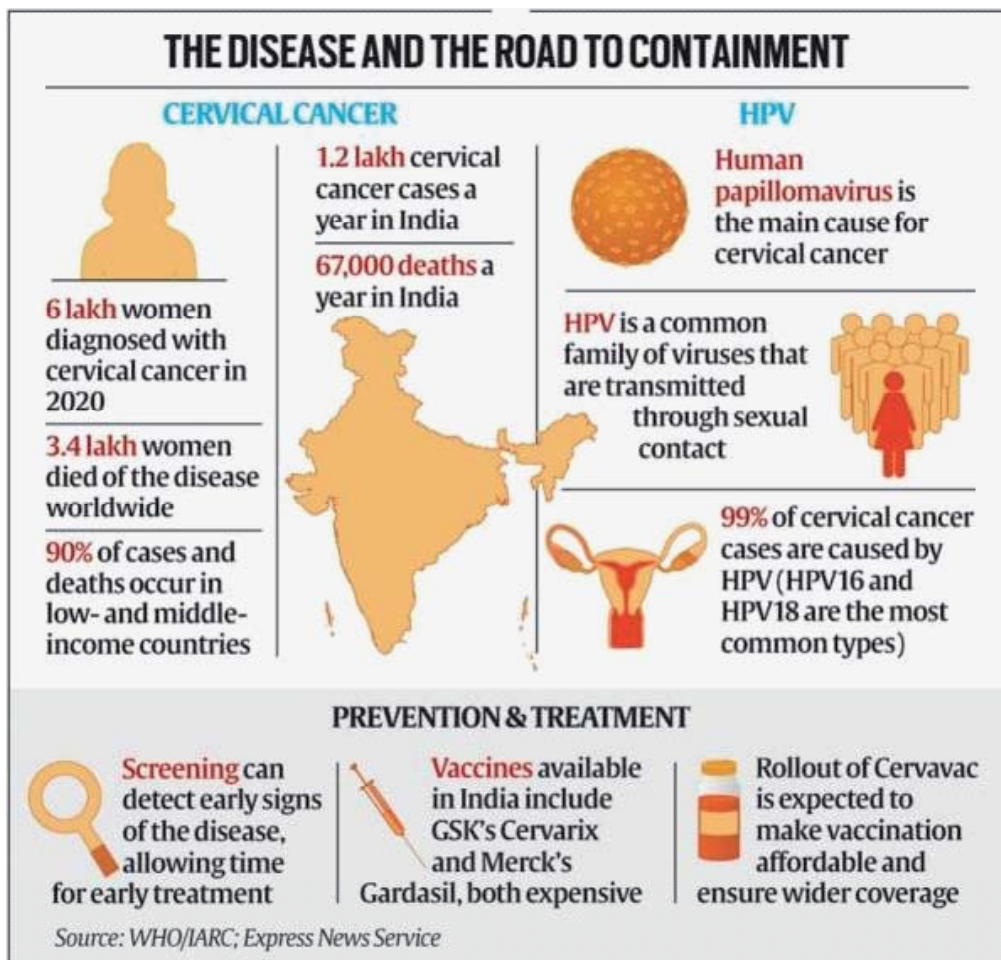
#### Instances of Infection:

- Almost all cervical cancers are found in women who have a history of HPV infection.**
- But having an HPV infection **may not lead to cancer** in all cases, rather it must be noted that **over 80% of women have an HPV infection in their lifetime** and **almost all of them can clear it**.

- But in some people, some high-risk types of HPV persist and lead to cervical cancer.
- In addition, having multiple sexual partners, poor hygiene, and smoking are other factors that increase the risk of developing cervical cancer.

#### How does vaccination against an infection protect against cancer?

- The best way to prevent cancer is to prevent an infection in the first place and vaccines help to a great extent.
- There are **two to four types of HPV** that lead to almost 70% to 80% of all cervical cancers and the vaccines prevent these infections. **Since the virus is sexually transmitted, it has to be given to teenage girls before they are sexually active.**





- **Once an infection happens, the vaccine cannot clear it out. Hence, the effectiveness of the vaccine keeps dropping with age.**

**About Cervical Cancer:**

- Cervical cancer is a prevalent sexually transmitted infection.
- It's a type of cancer that occurs in the cells of the cervix, the lower part of the uterus that connects to the vagina.
- It is mostly caused by long-term infection with particular forms of HPV.
- It is the second most prevalent cancer form and the second leading cause of cancer death in women of reproductive age.

**HPV vaccines presently available in India:**

- At present, there are two HPV vaccines available- **GSKs Cervarix (which** protects against the two most common types HPV 16 and 18) and **Merck's Gardasil (which** protects against two additional types 6 and 11).
- These vaccines cost between Rs 2,500 and Rs 3,300 per dose, with teenagers requiring at least two doses and those getting it later in life needing three.
- **Drugs Controller General of India (DCGI)** has granted market authorization to the **Pune-based Serum Institute of India (SII)** for the **first Quadrivalent Human Papillomavirus vaccine (qHPV)** against cervical cancer.

The **quadrivalent human papillomavirus (HPV) vaccine protects against infection with HPV types 6, 11, 16, and 18**, which are responsible for 70% to 80% of cervical cancers and at least 90% of cases of genital warts.

**Constraints in Immunization:**

- Universal immunization of all teenage girls becomes an **expensive proposition**.
- **Cervarix is not readily available in India so we had to start using the other one, which is costlier.**

**Significance of India's first quadrivalent HPV vaccine:**

- It will drastically **bring down the incidence and deaths** caused by cervical cancer in India (**India contributes to about a fourth of the global mortality from cervical cancer**).
- Once India-made vaccines are available, it will make it cheaper and more cost-effective for governments to give the shot under public health programs. **And, hopefully, it will become a part of the national program as well.**

**Options left to those who missed vaccination:**

- **Regular screening** is the best way to keep an eye out for whether they have cervical cancer.
- **HPV test has a higher detection rate** in comparison to **Pap Smear Test** (a procedure where a small brush is used to remove cells from the cervix to be studied under a microscope). The sample is collected similarly but it looks for the high-risk types of HPV in the cells.
- This test should be done starting two to three years after sexual activity begins, then every five years till the age of 65 years.

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# WHO BATS FOR PASSING ON GENOMICS TECH TO DEVELOPING WORLD

## CONTEXT:

Recently, WHO' Science Council has released a report "Accelerating access to genomics for global health" advocating for passing on Genomic Technologies to developing countries.

### About the Report

- The report was published by the **World Health Organization's Science Council**.
- The report followed **WHO's 10-year strategy for genomic surveillance of pathogens**.
- Genomic surveillance has **played a crucial role in the global COVID-19 response**.

#### What is WHO Science Council?

- Established in **April 2021 by WHO Director**. It is composed of **9 leading scientists** and public health experts from around the world.
- The council **advises the Director** on high-priority issues and advances in science and technology that could directly improve global health.
- It **identified genomics as the focus of its first study**, given the significant implications for public health.

### What are the Highlights WHO's Report?

- **Access to genomic technologies** needs to be expanded, especially for Low- and Middle-Income Countries (LMIC).
- It is **not ethically or scientifically justifiable** for countries with fewer resources to gain late access to such technologies.
- **Shortfalls in** financing, laboratory infrastructure, materials and highly trained personnel **need**

**to be addressed to expand access** to genomic technologies.

- The **benefits will not be fully realized** unless deployed worldwide.
- **Only through equity** can science reach its full potential impact and improve health for everyone, everywhere.
- The report recommended **addressing four themes**:
  - ▶ Advocacy, implementation, collaboration and associated ethical, legal and social issues.
- The report **also recommended** WHO **create a Genomics Committee** to take forward the recommendations and monitor their applications.

#### TOOLS:

There **are several tools to make genomic technologies more affordable**:

- **Tiered pricing**: A tiered pricing model refers to the cost of goods going down — or discounts increasing — based on the quantity purchased.
- Sharing of intellectual property rights for **low-cost versions**
- Cross-subsidisation, whereby profits in one area are used to fund another etc.

#### What is Genomics?

- Genomics is an **interdisciplinary field** of biology focusing on the structure, function, evolution, mapping, and editing of genomes.
- Genomics **uses a combination of** recombinant DNA, DNA sequencing methods, and bioinformatics to sequence, assemble, and analyse the structure and function of genomes.
- It **differs from 'classical genetics'** in that it considers an organism's full complement of hereditary material, rather than one gene or one gene product at a time.
- **All living things**, from single-celled bacteria, to multi-cellular plants, animals and humans, have a genome — and ours is made up of DNA.
- **Frederick Sanger- 'the father of genomics'**



### Applications and uses of genomics

This table is an overview and not a comprehensive accounting of all current and potential applications.

Applications.	Use
Human genomics for medical purposes	<ul style="list-style-type: none"> <li>Risk assessment (carrier screening, prenatal screening tests, newborn, child, and adult screening)</li> </ul>
	<ul style="list-style-type: none"> <li>Diagnosis of disease, both single gene and common disorders</li> <li>Treatment selection, including pharmacogenomics to target therapies and reduce adverse events, gene editing, and gene therapy</li> <li>Disease prognosis and monitoring</li> </ul>
Microbial genomics for medical purposes	<ul style="list-style-type: none"> <li>Identification of infectious agents and development of diagnostic tests for the disease</li> <li>Contact tracing of infectious agents</li> <li>Investigation of cluster outbreaks to identify potential sources of the infectious agent</li> <li>Mapping chains of transmission of infectious agents within a community</li> <li>Assessment of characteristics such as infectivity and severity of associated disease</li> <li>Design of vaccines and prediction of responses to vaccines and medications</li> </ul>
Agriculture and aquaculture genomics	<ul style="list-style-type: none"> <li>Catalogue of genetic diversity in the wild and in founder stocks</li> <li>Identification of new traits and disease susceptibility Selection of traits in genetic programmes</li> </ul>
Biological and medical research	<ul style="list-style-type: none"> <li>Discovery of genes influencing disease</li> <li>Rational drug development</li> <li>Identification of genetic signatures in combination with other biomarkers</li> </ul>
Other	<p>Assessment of ancestry and parentage</p> <p>Environmental and ecological sciences</p> <p>Forensic science</p>

### RECOMMENDATIONS OF WHO REPORT:

RECOMMENDATIONS OF REPORT	HOW WHO CAN CONTRIBUTE
<p><b>Promote the adoption or expanded use of genomics</b> in all Member States <b>through advocacy</b> by many parties.</p>	<p>WHO should use its <b>leadership role</b> in global public health to advocate for the expanded use of genomics in its Member States.</p> <p>WHO <b>should promote affordable access to genomic technology globally so that</b> all Member States, especially Low and Middle-Income Countries (LMICs), can adopt and expand the use of genomics for better health and other benefits.</p>
<p><b>Identify and overcome the practical issues</b> that impede the implementation of genomics through local planning, financing, training of essential personnel, and the provision of instruments, materials, and computational infrastructure.</p>	<p>WHO should <b>provide guidance</b> to Member States on best practices for implementation of national or regional genomic programmes.</p> <p>Member States <b>should establish national programmes</b> for building or expanding genomic capabilities or join a regional programme.</p>

<p><b>Foster commitments to collaborative activities</b> to promote all aspects of national and regional programmes that advance genomics in the Member States.</p>	<p>WHO <b>should promote international collaborations</b> on genomics by strengthening effective existing collaborative arrangements and by helping form new ones for specific needs.</p> <p><b>Industry, academia, and civil society</b> should <b>collaborate</b> on the use of genomics to help solve important health problems, especially those prevalent in LMICs.</p>
<p>Promote <b>ethical, legal, and equitable use</b> and responsible sharing of information obtained with <b>genomic methods</b> through effective oversight and national and international rules and standards in the practice of genomics.</p>	<p>WHO's <b>Genomics Committee should be the custodian of guidance</b> on how to deal with the ethical and social ramifications of genomics, including the global governance of genomic information.</p> <p><b>Organizations in Member States</b>, especially funding agencies, academic institutions, and governmental units <b>should be attentive to ELSIs and to efforts being made by WHO</b> and other international bodies to develop solutions to outstanding issues related to genomic ELSIs.</p>

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# THE DEBATE AROUND THE FOREST CONSERVATION RULES

## CONTEXT:

There has been much opposition to the recently updated Forest Conservation Rules.

### What are the Forest Conservation Rules?

- The Forest Conservation Rules **deal with the implementation** of the Forest Conservation Act (FCA), 1980.
- They **prescribe the procedure** to be followed for forest land to be diverted for non-forestry uses such as road construction, highway development, railway lines, and mining.

### Objectives of the Rules

- To **protect** forests and wildlife.
- **Put brakes on State governments'** attempts to hive off forest land for commercial projects.
- Strive to **increase the area under forests**.

### Highlights of the Rules

- For forest **land beyond five hectares**, approval for diverting land must be given by the Central government.
- This is via a specially constituted committee, called the **Forest Advisory Committee (FAC)** which examines –
  - ▶ If those who have requested forest land have made a convincing case for the upheaval of that specific parcel of land.
  - ▶ If they have a plan in place to ensure that the ensuing damage from the felling of trees in that area and denuding the local landscape will be minimal.
  - ▶ If the said piece of land doesn't cause damage to wildlife habitat.
- **Once the FAC is convinced** and approves or rejects a proposal, it is forwarded to the concerned State government.
- The State government **has to ensure that provisions** of the Forest Right Act, 2006 are **complied** with.
- The **FAC approval also means that the future users of the land** must provide compensatory land for afforestation and pay the net present value.

### Forest Advisory Committee

- It comes under the Ministry of Environment, Forests & Climate Change (MoEF&CC).
- It considers questions on the diversion of forest land for non-forest uses such as mining, industrial projects, townships and advises the government on the issue of granting forest clearances.

### What is the need for updating of Forest Conservation Rules?

After 2009, the Environment Ministry passed an order mandating that proposals would not be entertained by the FAC unless there was a letter from the State specifying the following,

- The forest rights in the place had been **"settled"**
- The **gram sabha**, or the governing body in villages in the area, had given their written consent to the diversion of forest.

But the **Ministry of Tribal Affairs frequently opposed the order** and **wanted to do away** with the **necessary consent** from the Gram Sabha.

### What is the change? /Benefits of the New Rules

- The new rules **formally codify the Ministry of Tribal Affairs demands**.
- It says that a project, **once approved by the FAC**, will then be passed on to the State authorities who will collect the compensatory fund and land, and process it for final approval.
- The rules make a **provision for private parties to cultivate plantations** and **sell them as land to companies** that need to meet compensatory forestation targets.
- This will **help India increase forest cover** as well as **solve the problems of the States of not finding compensatory land** within their jurisdiction.

### HOW WILL THE NEW RULES AFFECT TRIBAL RIGHTS?

#### Done away with FRA compliance:

- The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, popularly known as the Forest Rights Act, 2006, **confers land and livelihood rights both individual and community to tribal, Dalit and other families living in forest areas.** Under the law, **FRA compliance is mandatory** before clearance is accorded for diversion of forest land for non-forest purposes
- The **Forest (Conservation) Rules, 2022, delinks mandatory FRA compliance** for seeking forest clearance for infrastructure projects and puts onus on states/UTs to ensure that it is complied with before the forest land is handed over to the project proponent

#### Impacts fifth schedule:

- The local representation of the **Adivasis and OTFDs has been completely ignored** in the **Advisory Committee (Section 3) and Regional Empowered Committee (Section 6).**
- Under the new rules, **these committees act as a connecting link between the state and Union government in the decision-making process.**
- The **non-representation of the Adivasis and OTFDs** effectively captures the inclusive aspects of the decision-making process.
- The formation of these committees stands in **contradiction to the provisions of Fifth Schedule** of the Constitution wherein the **Tribes Advisory Council (TAC)** is the consultative forum, as referred by the Governor of the state, in the matters of tribal administration and development.

#### Negation of gram sabha role:

- In the new rules, prior approval of the **gram sabha is not mentioned** signifying the nullification of its role. The term **"survey"** mentioned **in the Section 2** of the **new rules**

**fails to take** into account the **gram sabha or panchayat consent** in the approval of the project.

- This **not only negates** the provisions of the FRA, but also the **Supreme Court's historic judgements** of **Samatha vs State Of Andhra Pradesh and Ors (1997)** and **Orissa Mining Corporation v Ministry of Environment & Forest & Others (2013).**
- In both these cases, the **top court has upheld the consent of the gram sabha as the supreme authority to decide** whether to allow bauxite mining by Vedanta.

#### Other impacts on tribal rights:

- The new rules **allow the Union government to permit the clearing of a forest** for a project before prior consent of the forest dwellers, as mandated under the 2006 Act.
- The Advisory Committee, Regional Empowered Committee and the Project Screening Committees, as envisaged in the newly notified rules, **violate the PESA provisions** by giving primacy to these committees in place of local communities and gram sabha.
- There is **no representation from the Union Ministry of Tribal Affairs and Social Justice in these committees.**
- Another big omission in the **new rules is the neglect of the "community ownership"** of natural resources including the forest.

#### Criticism against the New Rules

- There is an **absence of wording on what happens to tribals and forest-dwelling communities** whose land would be hived off for developmental work.
- Once approved by the FAC, it will then be passed on to the State authorities who will collect the compensatory fund and land, and process it for final approval.
- This doesn't **automatically imply the consent** of the resident tribals and forest dwellers.
- The new update is focused on the **increase of the approval process and not its assessment.**

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# TAKING OFF FROM COP26: IS GREEN GRIDS INITIATIVE THE WAY FORWARD FOR INDIA?

## CONTEXT:

- India launched Green Grids Initiative in collaboration with UK last year, there persists some challenges.
- This brief aims to analyse the challenges and opportunities in implementing this initiative.

## ◎ BACKGROUND:

- The COP26 summit held last year, brought parties together to accelerate action towards the goals of the **Paris Agreement and the UN Framework Convention on Climate Change (UNFCCC)**.
- The conference called for participating nations to accelerate their transition from fossil fuels to clean power.
- Based on this PM Modi announced India's **Panchamrit** to accelerate the energy transition in India.
- Furthermore, under the **International Solar Alliance**, India announced the launch of the **Green Grids Initiative — One Sun, One World, One Grid (GGI-OSOWOG)** in partnership with the United Kingdom.

### International Solar Alliance:

- The International Solar Alliance (ISA) is an **action-oriented**, member-driven, collaborative platform for increased deployment of solar energy technologies.
- Its basic **motive** is to facilitate energy access, ensure energy security, and drive energy transition in its member countries.
- The ISA was conceived as a **joint effort** by India and France to mobilize efforts against climate change through deployment of solar energy solutions.

### One Sun, One World, One Grid- Osowog) About-

- The **idea** for the One Sun One World One Grid (OSOWOG) initiative was put forth by the Hon'ble Prime Minister of India Shri Narendra Modi, at the **First Assembly of the International Solar Alliance (ISA)** in October 2018. He had called for connecting solar energy supply across borders.
- OSOWOG will be developed under the World Bank's technical assistance.
- OSOWOG is planned to be completed in **three phases**.

- The first phase will entail interconnectivity within the Asian continent; the second phase will add Africa and the third phase will globalise the whole project.

## Evolution of OSOWOG into GGI-OSOWOG

**Green Grids Initiative** was a program of the **United Kingdom (UK)**.

The **United Kingdom and India agreed** to combine forces of the Green Grids Initiative and the One Sun One World One Grid initiative and **jointly launch GGI-OSOWOG** at the **COP26** summit being hosted by the UK at Glasgow in November 2021.

## Aim of GGI-OSOWOG:

This **project aspires to** harness the sun's energy and build a global interconnected electricity grid to accelerate the transition to renewable energy.

The development of the grids **will take place in three stages**:

- The interconnection of the Indian grids with the Middle East, South Asia and Southeast Asian (MESASEA) grids
- MESASEA grids' interconnection with the African power grid
- Finally, global interconnectivity

The **initiative is expected** to connect more than **80 countries** across a large geographical area, with varying levels of sunlight. A transitional system will enable countries with low levels of sunlight to obtain energy from areas with an excess of it.

## Benefits of GGI:

- GGI** can transform the traditional energy system by replacing thermal power plants with solar energy, making India more resilient against extreme weather conditions and less dependent on fossil fuels.
- Solar energy** will improve the lives of rural people of India by enabling them to carry out activities and improving their standard of living in an environmentally friendly manner.

**For example: solar-powered agriculture pumps** to extract groundwater, which are more environmentally friendly than traditional diesel ones. The number of diesel pumps in India is 10 million.

- GGI can **enhance the quality of life** of rural communities in many other areas like access to electronic gadgets, clean drinking water, among others.
- One worldwide grid will **provide access to clean energy at all places** with reducing the need to store energy, as well as increasing the viability of solar projects.
- India is **targeting to generate 40% of** power from non-fossil fuels by 2030 which will be boosted by the one sun one grid initiative.
- The proposed integration would lead to a **reduction in project costs**, higher efficiencies, and increased asset utilization for all the participating entities.

### Challenges:

- No clarity or any documentation on improving the efficiency of the existing solar energy infrastructure in the country.
- A majority of the solar energy infrastructure is located in desert regions, which brings dust deposits on panels. A layer of dust decreases solar power conversion efficiency by 40 per cent.
- **Environmental costs:** Solar energy technologies such as **batteries and panels** use energy-intensive raw materials and several **chemicals** and heavy metals that need to be handled and disposed of correctly.
- **Waste management:** India currently considers solar waste a part of electronic waste and does not account for it separately.

The **International Renewable Energy Agency (IRENA)** last December estimated that the global photovoltaic waste will touch **78 million tonnes by 2050**, with India expected to be one of the top five photovoltaic-waste creators.

### Solar panel life:

- Solar panels generally have a lifespan of 25 years, after which they have to be retired since they lose their efficiency.
- According to these trends, it is estimated that **28 million panels** will have to be decommissioned every year, **starting 2026**.
- Most of these panels will be **disposed of in landfills**, drawing severe environmental repercussions.

### What is solar waste?

- It is the **electronic waste (e-waste)** generated by discarded solar panels and Photo-voltaic (PV) devices.
- Although up to 90% of the components are recyclable, many PV modules contain heavy metals such as **cadmium, copper, lead, antimony or selenium**, and when they are taken out of service or broken, they may be classified as hazardous waste.

### Required measures:

#### Reuse and recycle of waste material

- The market value of raw materials recovered from solar panels could reach **\$450 million** by 2030, according to a projection by the International Renewable Energy Agency.
- The value of recoverable materials **might surpass \$15 billion by 2050**, which would be enough to power 630 GW with two billion solar panels.

### Why are we not recycling more?

- The large cost gap between recycling and discarding panels in landfills points to an unpleasant truth: The process generates roughly \$3 in revenue from the recovery of certain materials.
- Recycling a solar panel cost between \$20 and \$30, according to the National Renewable Energy Laboratory; sending it to a landfill costs \$1-2.
- India **can revise** its existing electronic waste management framework to include PV modules and batteries on the lines of extended producer responsibility (EPR).
- **Under the extended EPR**, developers should report the sale of their products, collect the damaged or discarded products from consumers free of cost, and update the status of their targets.
- A **market-driven initiative** is important for a thriving waste collection and recycling industry. The various stakeholders of the Indian solar industry should take responsibility to invest in recycling technologies, finance routes, and feasibility examination by pilot projects.

**For example:** Solar Energy Industries Association (SEIA) in the United States and Japan's New Energy and Industrial Technology Development Organization (NEDO)



© **CONCLUSION:**

As distributed renewable energy sources such as solar PV and energy storage penetrate deep into the Indian electricity sector, it is necessary to prepare for managing the waste generated from these technologies. In addition to being environmentally benign, the 'reduce, reuse, and recover' approach

offers multiple socio-economic co-benefits. The local manufacturing industry will benefit from decreased dependence on the import of raw materials. It is imperative for the government to introduce a holistic policy framework for handling the waste from clean energy technologies, highlighting the responsibility of different stakeholders, and creating an enabling environment to implement the same.

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**SECTION: B**  
**(SPECIALS)**

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**CURRENT AFFAIRS**

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## GST 2.0

### CONTEXT

The Goods and Services Tax (GST) recently celebrated its fifth anniversary.

- While the idea of “one nation, one tax” has seen the light of day with the implementation of GST, the law is still evolving and can be a better version of itself, let’s say with GST 2.0.

#### ◎ BACKGROUND:

- In India, the idea of adopting GST was first suggested by the Atal Bihari Vajpayee Government in 2000.

##### Goods and Service Tax (GST)

- Being touted as one of the biggest indirect tax reforms in the country, GST was introduced to mitigate the double taxation
- Slogan:** ‘One Nation One Tax’.
- Objectives:** To mitigate the cascading effect of taxes, a multiplicity of taxes, classification issues etc., and has led to a common national market.
  - The GST that a merchant pays to procure goods or services (i.e. on inputs) can be set off later against the tax applicable on supply of final goods and services.
  - The set off tax is called **input tax credit**.
  - The GST avoids the cascading effect or tax on tax which increases the tax burden on the end consumer.
- Levied on:
  - The GST has subsumed indirect taxes like excise duty, Value Added Tax (VAT), service tax, luxury tax etc.
  - It is essentially a consumption tax and is levied at the final consumption point.
- In 2002, the Vajpayee government formed a task force under **Vijay Kelkar** to recommend tax reforms.
- In 2005, the **Kelkar committee** recommended rolling out GST as suggested by the **12th Finance Commission**.
- GST was introduced through the **101<sup>st</sup> Constitution Amendment Act, 2016**.

#### ◎ ANALYSIS:

**How the implementation of GST has**

#### **impacted the economy?**

- Single taxation:** The introduction of GST has brought a single indirect tax regime for the whole country, attracting foreign investment without any tax complexities.
- Stability in tax rate:** GST has also provided stability in the tax rate, reducing the multiple and unstable tax rate complexities, further providing an impetus to the foreign capital inflow.
- Common technological platform:** A common technology platform has been introduced in the form of a GSTN where key business processes of registration, payment of duties and filing of returns are done online in a transparent manner.
- Ease of payment:** The ease of payment method in a transparent manner, led to increase in the GST registration from 1.08 crore in 2018 to 1.36 crore in 2022.
- Gain in revenue collection:** The implementation of GST has increased the revenue collection for both centre and states. The proportion of GST collected to GSDP (Gross State Domestic Product) rose from 5.8 per cent to 6.4 per cent.
- Rise in overall tax to GDP ratio:** If we consider the RBI’s proposed three-percentage-point reduction in the incidence of GST tax from 14.8 to 11.8 percent, the real proportion in 2021-2022 would have been 7.4 percent of GDP.

#### **What are the major factors contributing to such success?**

- Rationalization of Input tax credit:** Input tax credit to the buyers will only be provided if the supplier uploads the invoice in the GST portal.
- E-invoicing:** The introduction of the e-invoicing process has created a transparent, easy, and efficient method of invoicing, increasing the number of invoices and reducing discrepancies.
- E-way bills:** E-way bills have also been introduced for interstate trade, making the trade flow easy and barrier-free among the states, further contributing to more revenue generation.

- **Coordination between CBIC and CBDT:** Greater coordination between the Central Board of Excise and Customs (CBIC) and Central Board of Direct Taxes (CBDT) in compliance verification.
- **Seamless implementation:** It would also be important to laud the success of the Centre-State partnership under the aegis of the GST Council which has ensured that all policy decisions are implemented seamlessly across states.

### What are the persistent issues with the GST?

- **Controversies** – The basic weakness of GST is its political architecture as it is asymmetrically weighted in favor of the Centre.
- **Design flaws**-Nearly 45% to 50% of commodity value is outside the purview of the GST, such as petrol and petroleum products.
- **Disputes Resolution:** The fundamental weakness of the GST is its political architecture as it is asymmetrically loaded in favour of the Centre.
  - ▶ **No specific body is tasked with adjudicating disputes between states and between the center** and states.
  - ▶ This is despite the fact that the original constitutional (115<sup>th</sup> Amendment) Bill of 2011 (GST Bill) contained such an institution.
- **Compensation Scheme** - *GST Compensation Cess* was introduced to compensate the losses of the states in the first 5 years under the GST regime.
  - ▶ As per the GST, the states were guaranteed compensation at the compounded rate of 14 percent from the base year 2015-16 for losses arising due to the implementation of the taxation regime for five years since its rollout.
  - ▶ When this 14% compensation comes to an end by the end of 2022, severe fiscal strain is expected and a reduction in GST revenue across the country to overcome the issue means that the compensation amount is going to be higher.
- **Exclusion:** Petroleum products remain outside the purview of GST. This would have otherwise been shareable with the States.
- **Inflation:** The more significant impact of the GST hikes is on inflation, specifically for food. While steps have been taken to initiate anti-profiteering at the retail level, no concrete action as such has been taken.
- **Increase in operational costs:** Requirement to hire experts to manage accounts and taxes.
- **Some sectors are at a loss-** Sectors like Textile, Media, Pharma, Dairy Products, IT, and Telecom are bearing the brunt of a higher tax.

### What to expect from GST Version 2.0?

After four years, of implementation, the promises of the Goods and Services Tax (GST) remain substantially unrealized. An updated version, namely **GST version 2.0** may have to be designed soon given the flaws in the existing structure.

- **Increased working capital requirement:** Manufacture who import raw material from other countries has to pay 14% GST, as compared to the old slab it used to be 14%. This has increased business working capital. It is expected that the issue will be taken care of in GST 2.0.
- **Blockage of working capital:** Payments are frequently getting blocked at various levels in the value chain, and it is becoming difficult for manufacturers to timely get the input tax credit.
  - ▶ **Central GST (CGST) pool made fungible across states:** Companies having a central GST balance in one state should be able to utilize the balance in another state.
  - ▶ **Allowing conversion of the accumulated input tax credit into tradeable scrips in the market:** This would help free up the working capital and mobilize unproductive assets in the financial statements of businesses.
- **Resolution of issues:** A National Bench of Advance Ruling can be put in place to solve the GST issues in rulings directed by several states. Formation of GST Appellate Tribunals can be one such step to be expected from GST in its new avatar.
- **Simplifying and rationalizing of ITC provisions:** In many cases, GST continues to carry vestiges of the erstwhile regime in terms of credit restrictions.
  - ▶ The GST laws have specific restrictions on the construction of the immovable property. Hence, the government must consider permitting such construction-related input tax credit.
- **Expansion of TAX network:** With petroleum outside the ambit of GST, a large part of the economy is still outside the tax net. Major reform is to be expected from GST 2.0 the inclusion of leftover sectors.0
- **Streamlining of audits, assessments, and investigations:** In recent times, there has been a surge in summons issued by GST authorities to top management of companies.
- Although the intention is to plug evasion, genuine companies have also come under the radar of investigating authorities, causing undue disruptions in their business operations.
- There is a lack of uniformity in the manner in which information and documents are sought during audits.

- GST 2.0 must come up with **detailed SOPs for processes** to be followed during summons and investigations. GST 2.0 should be a step forward in overcoming such issues and add to the *ease of doing business*.

### Required Measures

- A key step would be to change the law to require all units purchasing from unregistered GST providers to pay duty on a reverse charge basis.
- To give more procedural comfort to bigger units, provisions pertaining to the issuance of e-way bills and other regulatory procedures must be eased if purchases are made from a smaller unit with a turnover below a certain level.
- The **Securities and Exchange Board of India (SEBI)** can provide higher credit ratings to such units to further incentivize and encourage them to trade on the **TReDS platform** (the institutional mechanism to facilitate the discounting of invoices for MSMEs from corporate buyers through multiple financiers), encouraging them to expand.
- **Creation of federal independent body:** GST .0 requires an independent body at the state level which can bridge the senior officers from the center and the state, providing a common point of contract.

### ◎ CONCLUSION:

- While GST has helped achieve significant changes and objectives of a unified indirect tax regime, in the backdrop of 5 years of GST and the increasing audits/ investigations, the journey towards a “good and simple tax” will only continue.
- **GST 2.0 changes** need the **establishment of federal entities for dispute resolution**. Another institution, in the shape of a GST state secretariat, is required to bring together top executives from the Centre and states in an institutional forum recognized under the Society Act. This forum might also serve as a point of contact for commerce and industry to address non-policy concerns. This would show that, notwithstanding recent dissonance, India’s federal institutions remain intact and that Indian politics is founded on cooperative federalism as an intrinsic ideal.
- There is a **need for balancing revenue augmentation** measures and **ensuring ease of doing business for taxpayers**. A **change in mindset** coupled with a hard look at reforms will go a long way in providing further thrust to India’s economy as we continue on this road to recovery, post the pandemic.

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# **SECTION: C**

## **(PRELIMS)**

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### **CURRENT AFFAIRS**

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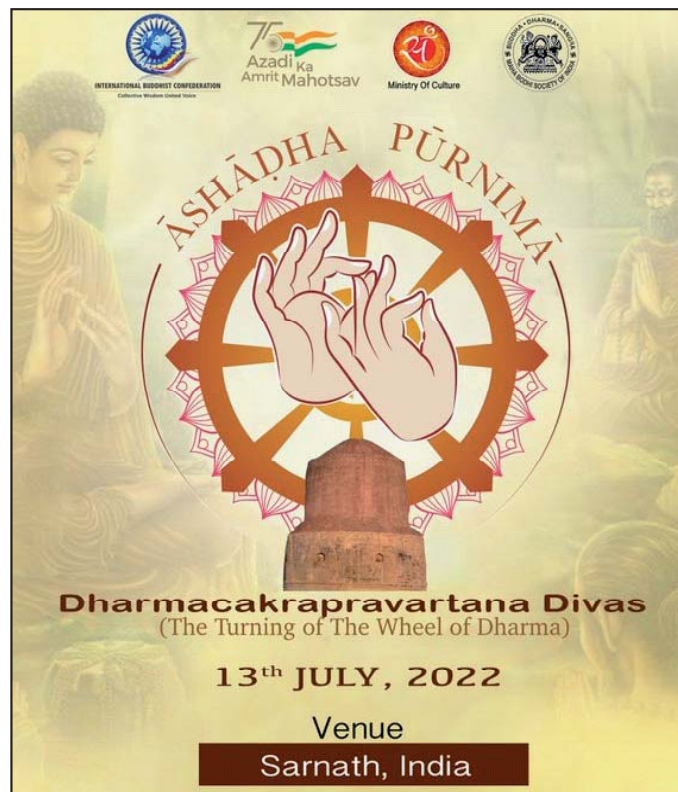


## PRESIDENT'S ADDRESS ON 'DHAMMACAKKA DAY 2022'

◎ **CONTEXT:** The President of India, Shri Ram Nath Kovind addressed the Dhammacakka Day 2022 celebrations at Sarnath, Uttar Pradesh.

### About:

- Dhammacakka Day 2022, **Āshāḍha Pūrṇimā** is the **second most important sacred day of observance for Buddhists after Vaishakha Buddha Pūrṇimā**.
- It commemorates **Buddha's First Sermon** or the First Turning of the Wheel of Dhamma, when he taught the **Dhammacakka-pavattana Sutta (Pāli)** or Dharmacakra pravartana Sūtra (Sanskrit).
- Seven weeks after his Enlightenment, he gave this discourse to **pañcavargiya - the first five ascetic disciples- at the 'Deer Park', Rṣipatana Mrigadāya in the current day Sarnath**, which is in Varanasi.
- It is here that the Buddha taught the **Four Noble Truths, the Eightfold Paths and the Middle Path**: avoiding the two extremes, i.e., life of extreme indulgence and the life of extreme penance.
- The International Buddhist Confederation, New Delhi has organised Dhammacakka Day 2022 (The Turning of the Wheel of Dharma), Āshāḍha Pūrṇimā on 13 July 2022 in Sarnath, U.P. (India).



### International Buddhist Confederation:

- It was formed in **2013** as an international Buddhist **umbrella body to serve as a common platform for Buddhists worldwide**.
- **Headquarters:** New Delhi.

- IBC represents the rich diversity of Buddhism and provides a platform for the global Buddhist community to share its wisdom and meaningfully participate in the on-going global social and political discourse, while at the same time preserving and promoting its shared heritage.

#### Guru Purnima

- According to the Hindu calendar, Guru Purnima generally falls on a **full-moon day** in the **Hindu month of Ashadh**.
- It is dedicated to **Maharshi Veda Vyasa**, the sage who is believed to have edited the sacred Hindu text, the Vedas and created the 18 Puranas, Mahabharata and the Srimad Bhagavatam.
- For Buddhists, the **festival marks the first sermon of Lord Buddha**, which is said to have been delivered at Sarnath, Uttar Pradesh, on this very day.
- It is also believed to **mark the onset of monsoons**.

## THE HISTORY BEHIND ANAYOOTTU: PAVED WAY FROM ASIAN GAMES

### © CONTEXT:

Anayoottu is an annual ritual celebrated at Sree Vadakkunnathan Temple at Thrissur.

#### Asiad Appu

- The elephants included Kuttinarayanan of Guruvayur Devaswom, later came to be known as '**Asiad Appu**'
- They are now **the mascot of the Asian Games**.

#### About

- This ritual was started to help elephants paraded at 1982 Games' opening ceremony held in
- Accordingly, Kerala's elephants were selected, along with other cultural forms of the country, for display at the opening ceremony of the Asian Games held in Delhi in 1982.
- Many of them belonged to the Guruvayur temple from Punnathur Kotta.
- After participating successfully in the parade at the opening ceremony of the Asian Games, the elephants returned.
- But the long journey made many of them sick and weak.
- To help them regain health, Anayoottu was started at the Sree Vadakkunnathan temple, where special nutritious food was fed to the

#### About Anayoottu

- The Anayoottu (feeding of elephants) is a festival held in the precincts of the Vadakkunnathan temple in City of Thrissur, in Kerala.
- The festival falls on the first day of the month of Karkkidakam (timed against the Malayalam calendar), which coincides with the month of July.
- It involves a number of unadorned elephants being positioned amid a multitude of people for being worshipped and fed.

- Aanayoottu, gaja pooja, is conducted every year.
- It is believed that offering poojas and delicious feed to the elephants is a way to satisfy Lord **Ganesha**—the god of wealth and of the fulfilment of wishes.
- The **Vadakkunnathan temple**, which is considered to be one of the oldest Shiva temples in southern India, has hosted the Aanayottoo event for the past few years.

## PYTHAGOREAN GEOMETRY IN VEDIC-ERA TEXTS, CENTURIES BEFORE PYTHAGORAS

### ◎ CONTEXT

A Position paper by the Karnataka government on the National Education Policy (NEP) 2020 has revived discussion that what we call the Pythagoras theorem was already known to Indians from the Vedic times.

### Historical Background

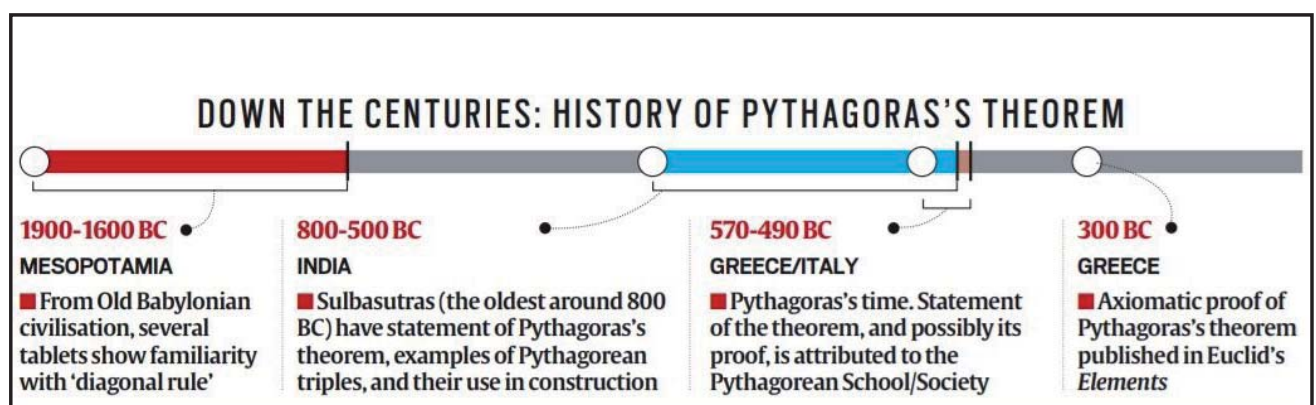
- The Pythagoras theorem describes the relationship connecting the three sides of a **right triangle** (one in which one of the angles is  $90^\circ$ ).
- There are similar references in the sulbasutras, which are texts pertaining to **fire rituals** (yajanas) performed by Vedic Indians. The oldest of these is the '**Baudhayana Sulbasutra**'.
- Baudhayana Sulbasutra contains a statement of what is called Pythagoras theorem.
- The earliest evidence of a proof comes from a period after the sulbasutras.
- The oldest surviving axiomatic proof of the theorem is in the **Elements of Euclid** from around **300 BCE**.
- It was mentioned in a paper describing geometry in the sulbasutras in '**Studies in History of Mathematics**, Proceedings of Chennai Seminar' in **2008**.

### What is the evidence that Sulbasutra contains?

- In the first chapter in the Baudhayana Sulbasutra contains, the (areas of the squares) produced separately by the length and the breadth of a rectangle together equal the area (of the square) produced by the diagonal.
- This is observed in rectangles having sides 3 and 4, 12 and 5, 15 and 8, 7 and 24, 12 and 35, 15 and 36.

### ■ Uses:

- The **yajna rituals** involved construction of altars (vedi) and fireplaces (agni) in a variety of shapes such as isosceles triangles, symmetric trapezia, and rectangles.
- The sulbasutras describe steps towards construction of these figures with prescribed sizes.



**What Pythagoras theorem says?**

- The Pythagoras theorem describes the relationship connecting the **three sides** of a right triangle (one in which one of the angles is  $90^\circ$ ):  $a^2 + b^2 = c^2$ , where a and b are the two perpendicular sides, and c is the length of the diagonal side.
- If any two sides of a right triangle are known, the theorem allows you to calculate the third side.
- Extended to the sides of squares and rectangles and their diagonals, the equation is of immense importance in **construction, navigation and astronomy**.

**What is the similarity between Sulbasutra's equation and Pythagoras?**

- The Pythagorean equation comes into play in these procedures, which involve drawing perpendiculars.
- These perpendiculars were based on triangles whose sides were in the ratio 3:4:5 or 5:12:13.
- These sides follow the Pythagorean relation, because  $3^2 + 4^2 = 5^2$ , and  $5^2 + 12^2 = 13^2$ . Such combinations are called **Pythagorean triples**.

**Did Indian mathematicians prove the equation?**

- The idea of a mathematical proof based on an axiomatic structure is **unique to the Greeks**.
- Thus in respect of the other cultures, 'proof' of a geometrical statement only meant some means of various cultures like one India has in its **Vedic times**.

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## IRAN, BELARUS TO BE NEWEST SCO MEMBERS

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- © **CONTEXT:** **The Shanghai Cooperation Organisation is all set for expansion with Iran joining the grouping as its ninth member.**

**Details:**

- The Shanghai Cooperation Organisation admits Iran into the grouping as its ninth member while Belarus has applied for membership.
- This is the first expansion of the SCO after India and Pakistan were admitted to the grouping in 2017.
- **Last year's summit in Dushanbe agreed for Iran to join**, while Belarus has also begun the membership process.
- Shanghai Cooperation Organisation (SCO) follows the system of consensus in deciding admission of new members.

**About Shanghai Cooperation Organization:**

- SCO is a permanent intergovernmental international organization.
- It's a Eurasian political, economic and military organization aiming to maintain peace, security, and stability in the region.
- It was created in 2001. Prior to the creation of SCO in 2001, Kazakhstan, China, Kyrgyzstan, Russia, and Tajikistan were members of the Shanghai Five.
- The SCO Charter was signed in 2002 and entered into force in 2003.
- India and Pakistan became members in 2017.
- SCO Secretariat – Based in Beijing to provide informational, analytical & organizational support.

- The 2022 annual summit of the SCO will be held in September in Samarkand (Samarkand also known as Samarqand, is a city in south-eastern Uzbekistan).

### Membership:

- The SCO currently comprises nine Member States (China, **India**, Kazakhstan, Kyrgyzstan, Russia, **Pakistan**, Tajikistan, **Iran**, and Uzbekistan), and **six "Dialogue Partners"** (Armenia, Azerbaijan, Cambodia, Nepal, Sri Lanka, and Turkey).
- **Significance:**
- **SCO's rising international influence:** It shows SCO's rising international influence and that the principles of the SCO charter are widely accepted.
- **SCO looks to counter the West:** After Iran, Belarus is likely to be the two newest additions to the China and Russia-backed Shanghai Cooperation Organisation (SCO) grouping. With the expansion, China and Russia are looking to frame the grouping as a counter to the West.
- **SCO is based on non-alignment:** SCO is a cooperative organization based on non-alignment and not targeting a third party, while NATO is based on Cold War thinking. The SCO believes one should not build its security at the expense of other countries while NATO is creating new enemies to sustain its existence.
- **Champion of co-existence:** The SCO members are working on profound changes that the international situation is undergoing to make the international order fairer and more reasonable.

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## CAATSA WAIVER

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### © CONTEXT:

**The US House of Representatives has made a historic decision and approved legislation that recommends an India-specific waiver under CAATSA as a part of an amendment during floor consideration of the National Defense Authorization Act (NDAA).**

### Details:

- The United States House of Representatives has passed by voice vote the legislative amendment that **approves waiver to India against the punitive CAATSA sanctions.**
- It was in the backdrop of India purchasing the **S-400 missile defense** system from Russia to help deter aggressors like China.

### About CAATSA sanctions:

- The **Countering America's Adversaries Through Sanctions Act (CAATSA)** law was brought in 2017 and provides for punitive actions by the US government against any country engaged in transactions with the Russian defense and intelligence sectors.
- **CAATSA is a tough US law that authorizes the US administration to impose sanctions on countries that purchase major defense hardware from Russia**
- Besides Russia, CAATSA is aimed at enforcing sanctions against Iran and North Korea.
- This was in response to Russia's annexation of Crimea in 2014 and its alleged meddling in the 2016 US presidential elections.

### Sanctions on India:

- **Types of Sanctions:** The CAATSA contains 12 types of sanctions. There are only two sanctions that may impact either India-Russia relations or India-US relations.
  - **Prohibition of Banking transactions:** The first of these, which is likely to have an impact on India-Russia relations, is the "Prohibition of Banking transactions".

This was meant for making it difficult for India in making payments in US Dollars to Russia for the purchase of the S-400 systems.

- **Export Sanction:** This is the “**export sanction**” which has the potential to completely derail the India-US Strategic and Defence partnership, as it will deny the license for, and export of, any items controlled by the US. The second sanction will have greater consequences for India-US relations.
- **Waiver Criteria:** The US President was given the authority in 2018 to waive CAATSA sanctions on a case-by-case basis.

### How did the issue raise?

- In October 2018, India signed a USD 5 billion deal with Russia to buy five units of the S-400 air defense missile systems, despite a warning from the then-Trump administration, **while ignoring the CAATSA**.
- The U.S. threatened India with sanctions over India’s decision to buy the S-400 missile defense systems from Russia.

The **S-400** is known as Russia’s most advanced **long-range surface-to-air missile defense system**. The US has already **imposed sanctions on Turkey under the CAATSA** for the purchase of a batch of S-400 missile defense systems from Russia.

### Reasons for waiver and US stand:

- The United States now recognizes the common goal of curbing China’s advancement in the region and the waiver will help to deter aggressors like China.
- It must stand with India in the face of escalating aggression from China to ensure that India can defend itself along the Indian Chinese border.
- The US recognizes the significance of its relationship with India in terms of strategic interests.

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## I2U2 HOLDS ITS FIRST-EVER LEADER’S SUMMIT

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◎ **CONTEXT:** Prime Minister Narendra Modi participated in the first-ever I2U2 Virtual Summit.

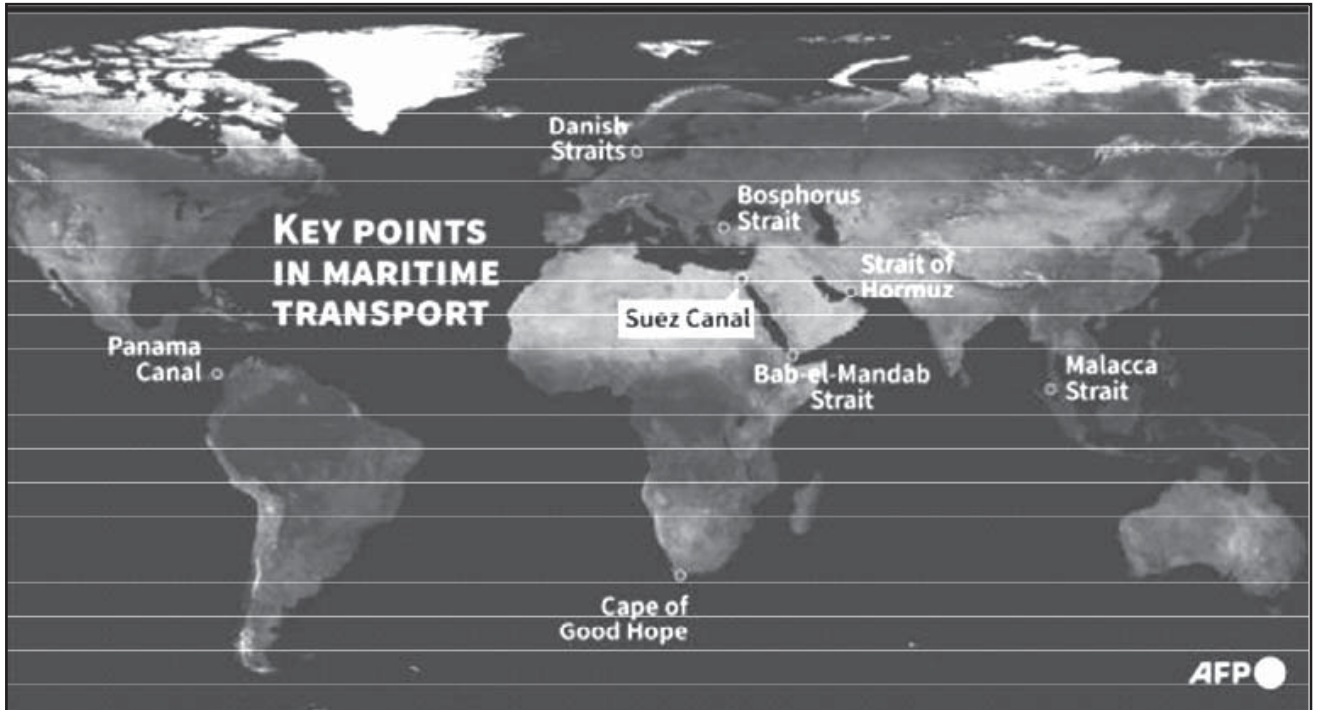
### About I2U2:

- I2U2 stands for **India, Israel, the UAE, and the US**.
- Moreover, the Ambassador of UAE to India, **Ahmed Albanna**, had referred to the new grouping as the ‘**West Asian Quad**’.
- The genesis of this group took place in middle-east to harness the maritime traffic of the Strait of Hormuz, Bab Al Mandab and Suez Canal region.
  - Out of the 8 maritime choke points in the world, these three lie closer to each other around Israel and UAE.

### Purpose of I2U2:

- **Strait of Hormuz:** The strait is approximately 167 km long, with a width of about 96 km at its widest to 39 km at its narrowest point.
  - One third of the world’s liquefied natural gas and almost 25% of total global oil consumption passes through the strait making it a strategic choke point.





- **Bab Al Mandab Strait:** This is a vital strategic link in the maritime trade route between Mediterranean Sea and Indian Ocean via Red Sea and Suez Canal.
  - On an average 60 ships pass through this strait each day. But unfortunately, this region has been infested with pirates and plagued by instability. This is another example of a choke point.



- **Suez Canal:** This is one of the more famous names of the three straits.
  - This is an artificial sea level trade route via Egypt, a vital trade link between Europe and Asia.
  - Statistics suggest 56 ships cross this canal each day.
  - One block in the canal in April 2021 had caused a lot of monetary loss to myriads of countries.



### Aim of I2U2 grouping

- The aim is to discuss “**common areas of mutual interest, to strengthen the economic partnership in trade and investment in our respective regions and beyond**”.
- **Six areas of cooperation** have been identified by the countries mutually, and the aim is to encourage joint investments in **water, energy, transportation, space, health, and food security**.
- With the help of “**private sector capital and expertise**”, the countries will look to **modernise infrastructure**, explore low carbon development avenues for industries, improve public health, and promote the development of critical emerging and green technologies.
- US President Biden’s recent visit to the Middle East will also focus on Israel’s increasing integration into the region, both through the **Abraham Accords** with UAE, Morocco and Bahrain.
  - The Abraham Accords of 2020 had led to Israel formally normalising diplomatic ties with the UAE and two other countries in the region, marking an important shift in the stance of West Asian countries on Israel.

### Significance of I2U2 Grouping:

- The grouping of the four nations- India, Israel, United Arab Emirates, and the United States met for the first time under a new framework in October 2021.
- At that time, the grouping of the four-nation was called ‘**International Forum for Economic Cooperation**’.
- India will receive the **benefit of the Abraham Accords to deepen engagement with Israel** without risking its ties with the UAE and the other Arab states.
- India will benefit from this grouping as India is a **massive consumer market and an immense producer of high-tech and highly sought-after goods as well**.

#### Abraham Accords

- The **Israel–UAE normalization agreement** is officially called the **Abraham Accords Peace Agreement**.
- It was initially agreed to in a joint statement by the United States, Israel and the United Arab Emirates (UAE) in August, 2020.
- The **UAE thus became the third Arab country, after Egypt in 1979 and Jordan in 1994, to agree to formally normalize its relationship with Israel as well as the first Persian Gulf country to do so**.
- Concurrently, Israel agreed to suspend plans for annexing parts of the West Bank. The agreement normalized what had long been informal but robust foreign relations between the two countries.

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## INCREASE IN INDIANS RENOUNCING THEIR CITIZENSHIP

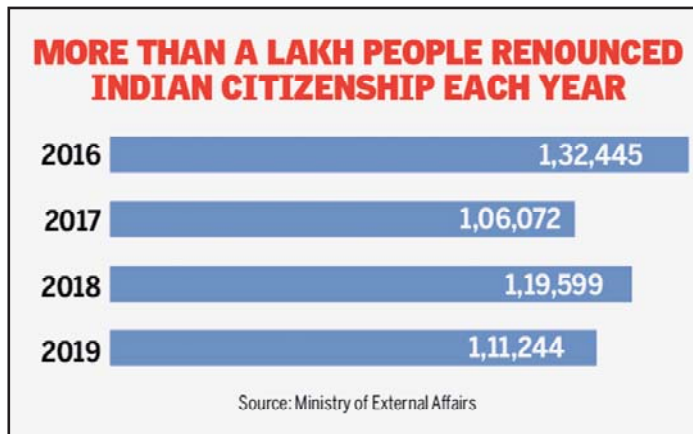
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### ◎ CONTEXT

According to the latest information provided by the **Ministry of Home Affairs (MHA)** to the Lok Sabha, over 1.6 lakh Indians renounced their citizenship in 2021, highest in the past **five years**.

### Key-highlights of the development

- **US remain the highest** among all countries for acquisition of its citizenship by other Nationals.
  - Over 78,000 Indians acquired **U.S. citizenship** by giving up Indian citizenship.
- As many as **362 Indians** living in China also acquired Chinese citizenship.
- **Others:** Australia- 23,533, Canada- 21,597, U.K.-14,637, Italy-5,986, Netherlands- 2187, New Zealand- 2643, Singapore- 2516, U.S.A.- 78284, Pakistan-41 and Nepal-10.



### The idea of citizenship

- The **Citizenship Act, 1955** provides for the **acquisition** and **renunciation** of Indian citizenship.
- India does **not allow dual citizenship**.

- Citizenship signifies the relationship between 'individual' and 'state'.
- India has two kinds of people—**citizens and aliens**. Citizens are full members of the Indian State and owe allegiance to it. They enjoy all **civil** and **political** rights.
- Citizenship is an **idea of exclusion** as it excludes non-citizens.

#### What does the Constitutional say for Citizenship?

The Constitution does not define the term 'citizen' but details of various categories of persons who are entitled to citizenship are given in **Part 2 (Articles 5 to 11)**.

- **Article 5:** It provided for citizenship on commencement of the Constitution.
- **Article 6:** It provided rights of citizenship of certain persons who have **migrated to India from Pakistan**.
- **Article 7:** Provided Rights of citizenship of **certain migrants to Pakistan**.
- **Article 8:** Provided Rights of citizenship of certain **persons of Indian origin residing outside India**.
- **Article 9:** Provided that if any person voluntarily acquired the citizenship of a foreign State will no longer be a citizen of India.
- **Article 11:** It empowers Parliament to make any provision with respect to the acquisition and termination of citizenship and all matters relating to it.

### What are the provisions for renunciation of the Citizenship in India?

The citizenship act, 1955 prescribes **three ways** of losing citizenship:



By renunciation	By termination	By deprivation
<p>Any citizen of India of full age and capacity can make a declaration renouncing Indian citizenship</p> <ul style="list-style-type: none"> <li>Such a declaration may not be accepted during war.</li> <li>Even the minor children of the person who renounces citizenship stands to lose their Indian citizenship. However, when their children attain the age of eighteen, he may resume Indian citizenship.</li> </ul>	<p>If a citizen of India voluntarily acquires the citizenship of another country, then he loses the citizenship of India. However, this provision does not apply during times of war.</p>	<p>It causes for compulsory termination of Indian citizenship by the Central government, in the following conditions:</p> <ul style="list-style-type: none"> <li>Obtained the citizenship by fraud.</li> <li>Citizen has shown disloyalty to the Constitution of India.</li> <li>Citizen has unlawfully traded or communicated during the times of war.</li> <li>Within 5 years of naturalization, the said citizen is imprisoned for a term of two years.</li> <li>Citizen has been ordinarily resident out of India for a period of 7 years.</li> </ul>

- After Renunciation of Indian Citizenship, it is necessary to apply for Surrender or a Renunciation certificate.
- However, such persons can get **Overseas Citizens of India (OCI) status** after acquiring foreign citizenship.

#### Recent changes in the policy

- The **Ministry of Home Affairs (MHA)** has simplified the process for Indians who want to renounce their citizenship.
- Provisions have been made for applicants to upload documents online, with an upper limit of **60 days** for the renunciation process to be completed.
- According to the **2009 Citizenship Rules**, the fee to renounce citizenship for an applicant in India is **₹5,000**, and for someone applying through an Indian mission in a foreign country is **₹7,000**.

## SCIENTISTS UNCOVER WHY URCHINS ARE MOWING DOWN CALIFORNIA'S KELP FORESTS

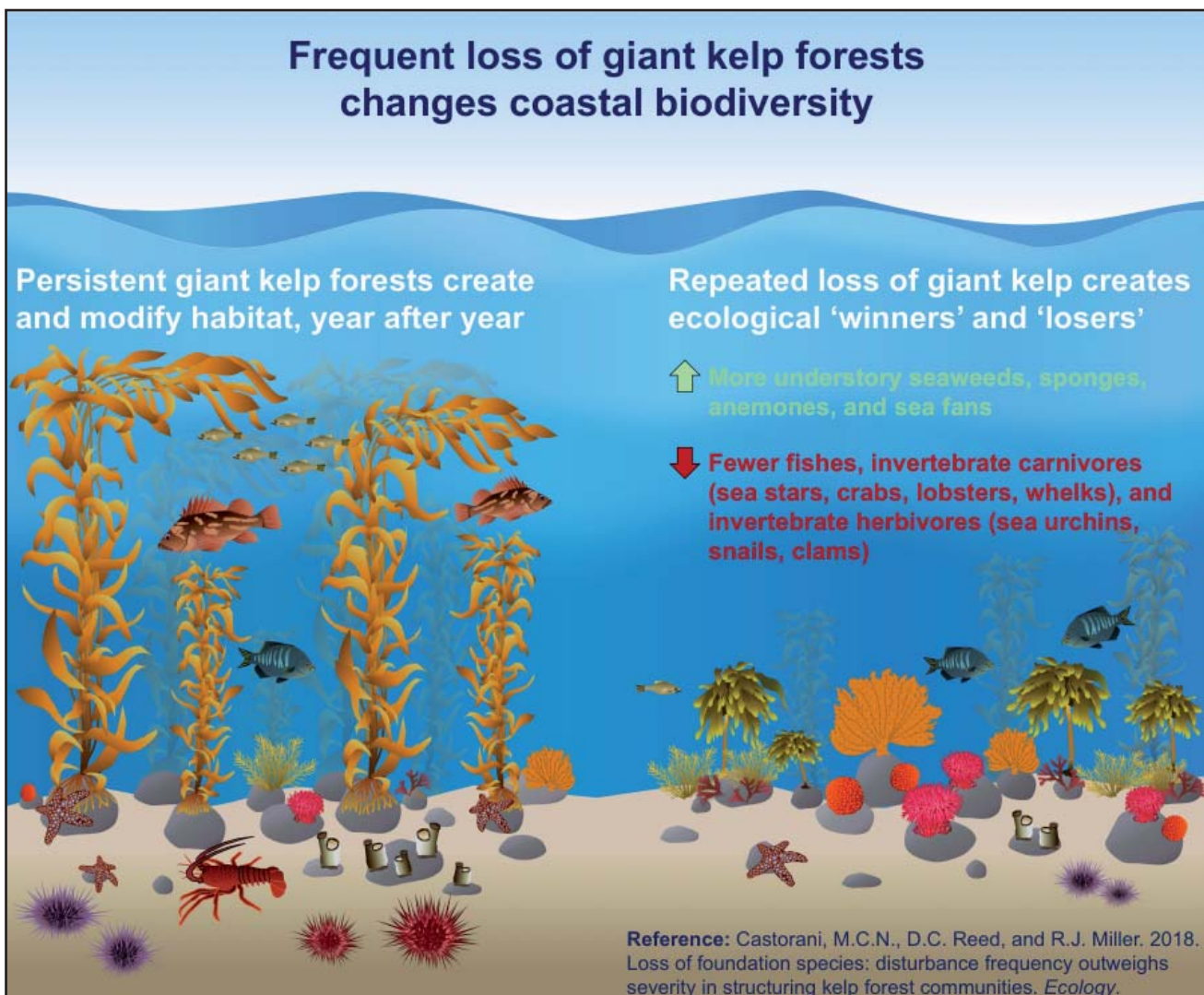
### ◎ CONTEXT:

A research team has been set out to investigate what prompts urchins to munch their way out of a home. They discovered that the availability of kelp scraps, or detritus, might be the deciding factor.

### Kelp Forests:

- Kelp forests are large brown algae that live in cool, relatively shallow waters close to the shore. They grow in dense groupings much like a forest on land. These underwater towers of kelp provide food and shelter for thousands of fish, invertebrates, and marine mammal species.
- Kelp forests harbor a greater variety and higher diversity of plants and animals than almost any other ocean community. Many organisms use the thick blades as a safe shelter for their young from predators or even rough storms.
- Among the many mammals and birds that use kelp forests for protection or feeding are seals, sea lions, whales, sea otters, gulls, terns, snowy egrets, great blue herons, cormorants, and shore birds.
- These dense canopies of algae generally occur in cold, nutrient-rich waters. Because of their dependency upon light for photosynthesis, kelp forests form in shallow open waters and are rarely found deeper than 49-131 feet.
- In ideal conditions, kelp can grow up to 18 inches per day, and in stark contrast to the colorful and slow-growing corals, the giant kelp canopies tower above the ocean floor.
- Like trees in a forest, these giant algae provide food and shelter for many organisms.
- Also like a terrestrial forest, kelp forests experience seasonal changes.

### Importance of Kelps:





- Kelp is a type of large, brown seaweed that grows in shallow, nutrient-rich saltwater near coastal fronts around the world.
- Seaweed farming is a sustainable practice, mainly because these farms help improve water quality.
- Kelp also produces a compound called sodium alginate
- They are high in iodine, potassium, magnesium, iron, calcium which are all nutrients your body needs to stay healthy.
- Kelp forests harbor a greater variety and higher diversity of plants and animals.
- Kelp is low in fat and calories.
- Seaweed also has the ability to use carbon dioxide to grow, which also helps balance out high nutrient levels in surrounding waters.

### Sea Urchin:

- The **marine animals** known as sea urchins look something like **globe-shaped pincushions**.
- They are members of the scientific group Echinodermata, meaning “**spiny skinned**.”
- Sea urchins are covered with **long, movable spines**.
- These spines help the slow-moving animal to “walk” and are also used to keep away enemies.
- There are more than 900 species, or types, of sea urchin. They live in all seas except those of the Polar Regions. They are found on the ocean floor, usually on hard surfaces.
- **Physical Features:**
  - Sea urchins are often shades of **red or purple**. They vary greatly in size.
  - Sea urchins are **invertebrates**, which mean they **do not have a backbone**. They do, however, have an internal skeleton known as a test.
    - ▶ Sticking out of the test are the spines and some pincer like organs known as pedicellariae, both of which may be poisonous.
  - Like its close **relative the sea star**, a sea urchin has **tube feet** to help with movement. These feet are often **tipped with suckers**. Along with the spines and pedicellariae, the tube feet help the sea urchin to grab food and bring it into its mouth.
- Sea urchins mainly **eat plant material**. The mouth contains a strong jaw piece called Aristotle’s lantern, which is made up of **five bony teeth**.
  - The teeth can be pushed out of the mouth to scrape algae and other substances off rocks.

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## INDIA ACHIEVES CLEAN ENERGY TARGETS 9 YEARS BEFORE DEADLINE

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### ◎ CONTEXT:

At the Sydney Energy Forum, the Union Environment Minister announced that India has achieved clean energy targets nine years ahead of schedule.

### About:

- India has achieved clean energy targets nine years ahead of schedule Power Minister said at the Sydney Energy Forum.
- India has installed 162 GW (1 GW is a 1000 MW) of renewable energy capacity which is 41% of the 402 GW of electricity installed.

- This target was reached in November 2021 and in Glasgow (at the UN COP-21) Prime Minister committed to installing 500 GW of renewable energy by 2030, which would then be 50% of the installed capacity.
- Despite having among the lowest per capita emissions in the world, India has invested in this energy transition because its traditions teach it to respect and care for the environment.
- In 2015, India committed to ensuring that 40% of its energy would be from renewable sources by 2030 as part of its Nationally Determined Contributions (NDC).

### Sydney Energy Forum:

- **Hosted by:** Australian Government and the International Energy Agency.
- **Aim:** To bring governments and industry leaders together to advance the development of clean energy.
- **Participants:** Ministers from the United States, Japan, India, Indonesia and the Pacific Island nation of Samoa are attending the forum.
- The forum will “foster connections between investors, business and government with a focus on innovations in key clean energy technologies such as solar, hydrogen, critical minerals and batteries.”
- The energy crisis that has gripped the world has been “sometime in the making” and not only due to the Russia-Ukraine war but because of the “cartelisation in the fossil fuel industry.”
- Renewable energy promised to break these cartels though it was possible that there would be newer such cartel forming in manufacturing and the equipment and the world would have to take steps to ensure that these don't coalesce.

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## SERUM INSTITUTE OF INDIA TO LAUNCH VACCINE TO PREVENT CERVICAL CANCER

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© **CONTEXT:** Serum Institute of India plans to launch its indigenously-developed vaccine to prevent cervical cancer in women.

### About:

- The Drugs Controller General of India (DCGI) recently granted market authorisation to Serum Institute of India (SII) to manufacture the indigenously-developed India's first Quadrivalent Human Papillomavirus vaccine (qHPV) against cervical cancer.

### Cervical Cancer:

- Cervical cancer develops in a woman's cervix (the entrance to the uterus from the vagina).
- Almost all cervical cancer cases (99%) are linked to infection with high-risk human papillomaviruses (HPV), an extremely common virus transmitted through sexual contact.
- Although most infections with HPV resolve spontaneously and cause no symptoms, persistent infection can cause cervical cancer in women.
- When diagnosed, cervical cancer is one of the most successfully treatable forms of cancer, as long as it is detected early and managed effectively.
- Cervical cancer in India ranks as the second most frequent cancer among women between 15 and 44 years of age.

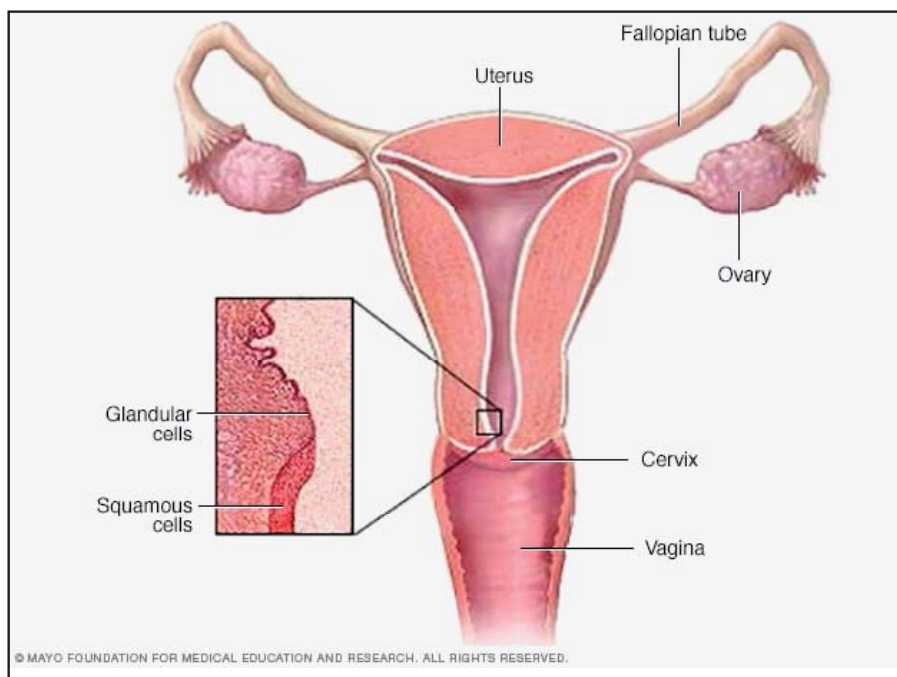
## Symptoms

Early-stage cervical cancer generally produces no signs or symptoms. Signs and symptoms of more-advanced cervical cancer include:

- Vaginal bleeding after intercourse, between periods or after menopause
- Watery, bloody vaginal discharge that may be heavy and have a foul odor
- Pelvic pain or pain during intercourse

## Causes

- Cervical cancer begins when healthy cells in the cervix develop changes (mutations) in their DNA.
  - A cell's DNA contains the instructions that tell a cell what to do.
- Healthy cells grow and multiply at a set rate, eventually dying at a set time.
  - The mutations tell the cells to grow and multiply out of control, and they don't die. The accumulating abnormal cells form a mass (tumor).
  - Cancer cells invade nearby tissues and can break off from a tumor to spread (metastasize) elsewhere in the body.
- It isn't clear what causes cervical cancer, but it's certain that HPV plays a role.



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## OLA UNVEILS INDIA'S FIRST INDIGENOUSLY MADE LITHIUM ION-CELL

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© **CONTEXT:**

Ola Electric recently unveiled India's first indigenously developed lithium-ion cell, NMC 2170.

**About:**

- Lithium-ion refers to rechargeable (or secondary) lithium batteries.

- Ola is building the world's most advanced cell research centre that will enable India to scale and innovate faster, and build the most advanced and affordable EV products in the world with speed.

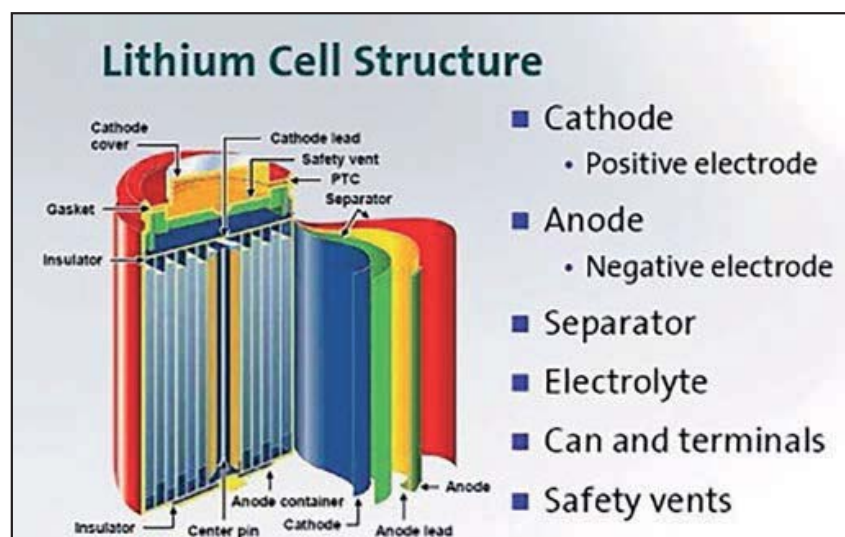


### Lithium-ion battery:

- Lithium-ion is the most popular rechargeable battery chemistry used today.
- Lithium-ion batteries power the devices we use every day, like our mobile phones and electric vehicles.
- Lithium-ion batteries consist of single or multiple lithium-ion cells, along with a protective circuit board.
- They are referred to as batteries once the cell, or cells, are installed inside a device with the protective circuit board.

### Components of a lithium-ion cell:

- Electrodes: The positively and negatively charged ends of a cell. Attached to the current collectors
- Anode: The negative electrode
- Cathode: The positive electrode
- Electrolyte: A liquid or gel that conducts electricity
- Current collectors: Conductive foils at each electrode of the battery that are connected to the terminals of the cell. The cell terminals transmit the electric current between the battery, the device and the energy source that powers the battery
- Separator: A porous polymeric film that separates the electrodes while enabling the exchange of lithium ions from one side to the other



### How does a lithium-ion cell work?

- In a lithium-ion battery, lithium ions (Li+) move between the cathode and anode internally.
- Electrons move in the opposite direction in the external circuit. This migration is the reason the battery powers the device—because it creates the electrical current.
- While the battery is discharging, the anode releases lithium ions to the cathode, generating a flow of electrons that helps to power the relevant device.
- When the battery is charging, the opposite occurs: lithium ions are released by the cathode and received by the anode.

#### About Lithium:

- Lithium is a chemical element with symbol Li and **atomic number 3**.
- It is a soft, silvery-white alkali metal.
- Under standard conditions, it is the lightest metal and the **lightest solid element**.
- Lithium is highly reactive and flammable, and is stored in mineral oil.
- It never occurs freely in nature, but only in (usually ionic) compounds, such as pegmatitic minerals, which were once the main source of lithium.
- Due to its solubility as an ion, it is present in ocean water and is commonly obtained from brines.
- Lithium metal is isolated electrolytically from a mixture of lithium chloride and potassium chloride.
- Lithium is a key component used in Electric Vehicle batteries. And India, through its Rs. 18,100- crore PLI scheme is offering incentives for companies to build battery cells locally.
- China and Hong Kong are the biggest lithium battery suppliers to India.

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## INDIA CONCERNED OVER 'MONKEYPOX'

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### ◎ **CONTEXT:**

Recently, the Health Ministry said that the States should aware, alert, and ready to tackle other public health threats such as monkey-pox which is on the rise globally.

#### **Background**

- Monkey-pox (MPX) was first discovered in 1958 in colonies of monkeys kept for research, hence the name 'monkey-pox.'
- The first human case of monkey-pox was reported in the Democratic Republic of the Congo (DRC) in 1970.
- Recently, an ongoing outbreak of the viral disease monkey-pox was confirmed in May 2022.

#### **About Monkey-Pox:**

- Monkey-pox (MPX) is a **viral zoonotic disease** with symptoms similar to smallpox, although with less clinical severity.
- It is a potentially serious viral illness that typically involves flu-like symptoms, swelling of the lymph nodes, and a rash that includes bumps that are initially filled with fluid before scabbing over.

- Illness could be confused with a sexually transmitted infection like syphilis or herpes, or chickenpox.

### Mode of transmission:

- **Human-to-human transmission** is known to occur primarily through large respiratory droplets generally requiring prolonged close contact.
- It can also be transmitted through direct contact with body fluids or lesion material, and indirect contact with lesion material, such as through contaminated clothing or linens of an infected person.

### Case fatality ratio

- The case fatality ratio of monkey-pox has historically ranged from 0 to 11% in the general population and has been higher among young children.
- In recent times, the case fatality ratio has been around 3-6%.

- **Animal-to-human transmission:** may occur by bite or scratch of infected animals like small mammals including rodents (rats, squirrels) and non-human primates (monkeys, apes) or through bush meat preparation.

### What causes monkey-pox?

- It is a rare disease that is caused by infection with the monkey-pox virus.
- This virus belongs to the **Ortho-pox-virus genus**.
- It includes the **variola (smallpox) virus** as well as the **vaccinia virus, which is used in the smallpox vaccine**.
- What are the symptoms of monkey-pox?
  - Swollen lymph nodes
  - Fever
  - Headache
  - Body aches
  - Profound weakness

### What is the treatment for monkey-pox?

- While there are **no specific treatments** for monkey-pox infections, **antiviral drugs licensed for smallpox use are effective and can be used against monkey-pox**.
- Monkey-pox is usually a self-limited disease with symptoms lasting from 2 to 4 weeks.
- Severe cases occur more commonly among children and are related to the extent of virus exposure, patient health status, and nature of complications.
- The extent to which asymptomatic infection occurs is unknown.

### What is the monkey pox vaccine?

- Two vaccines licensed by the **S. Food and Drug Administration (FDA)** are available for preventing monkey-pox infection - **JYNNEOS (also known as Imvamune or Imvanex) and ACAM2000**.



Component of management	Symptoms/Signs	Management
Protection of compromised skin and mucous membranes	Skin rash	Clean with simple antiseptic Mupirocin Acid/Fucidin Cover with light dressing if extensive lesion present Do not touch scratch the lesions In case of secondary infection relevant systematic antibiotics may be considered
	Genital ulcers	Sitz bath
	Oral ulcers	Warm saline gargles/ oral topical anti-inflammatory
	Conjunctivitis	Usually, self-limiting Consult Ophthalmologist if symptoms persist or there are pain/ visual disturbances
Rehydration therapy and nutritional support	Dehydration can occur in association with poor appetite, nausea, vomiting and diarrhoea	Encourage ORS or oral fluids Intravenous fluids if indicated Encourage nutritious and adequate diet
Symptom alleviation	Fever	Tepid sponging Paracetamol as required
	Itching Pruritus	Topical Calamine lotion Antihistaminics
	Nausea and vomiting	Consider anti-emetics
	Headache malaise	Paracetamol and adequate hydration tings to activate

## KILO CLASS SUBMARINE INS SINDHUDHVAJ DECOMMISSIONED

© **CONTEXT:**

The Navy's Kilo-class submarine, **INS Sindhudhvaj**, has been decommissioned at Visakhapatnam after **35 years** in service.

**About INS Sindhudhvaj**

- Commissioned into the Navy in June
- It was one of the **10 Kilo-class submarines** India acquired from **Russia** between the

year **1986 and 2000**.

- The submarine crest depicts a **grey colour nurse shark** and the name means **flag bearer** at sea.
- Sindhudhvaj was the flag bearer of indigenisation and Indian Navy's efforts towards achieving **Atmanirbharat** in the Russian built '**Sindhughosh**' class submarines.
- It was the only submarine to be awarded the **Chief of Naval Staff (CNS) rolling trophy** for Innovation by Prime Minister.
- **Key-features:**
- The submarines have a displacement of **3,000**
- It has a maximum diving depth of 300 meters, top speed of 18 knots, and they are able to operate solo **for 45 days** with a **crew of 53**.
- It has anti-ship cruise missiles with a range of **220 km**.
- After the decommissioning **of Sindhudhvaj**, Indian Navy now has **15 conventional submarines** in service.



### What are kilo-class submarines?

- **Kilo** is a class of **diesel-electric attack submarines** originally designed in the 1970s and built in the **Soviet Union** for the **Soviet Navy**.

### Operations Credited to Sindhudhvaj

- Operationalization of Indigenised sonar **USHUS**
- Indigenised Satellite Communication systems **Rukmani and MSS**
- **Inertial Navigation System**
- Indigenised **Torpedo Fire Control System**

#### Sindhughosh class Submarines in India Navy

- **Sindhughosh-class submarines** are Kilo-class **diesel-electric** submarines in active service with the Indian Navy.
- Their names are mainly in **Sanskrit**.

## MILITARY

# Types of submarines

Submarines can either be **diesel-electric or nuclear-powered**, both types can carry nuclear warheads. Here's how they differ.



### Diesel powered

- Require more frequent resurfacing making them easier to detect
- Tend to be smaller
- Cheaper to run and maintain

**SSK** Conventionally-powered attack submarine

**SSB** Conventionally-powered ballistic missile submarines



### Nuclear powered

- Can remain completely submerged for years, limiting detection
- Tend to be larger
- Require more expensive infrastructure and maintenance

**SSN** Nuclear-powered attack submarine

**SSBN** Nuclear-powered ballistic missile submarines

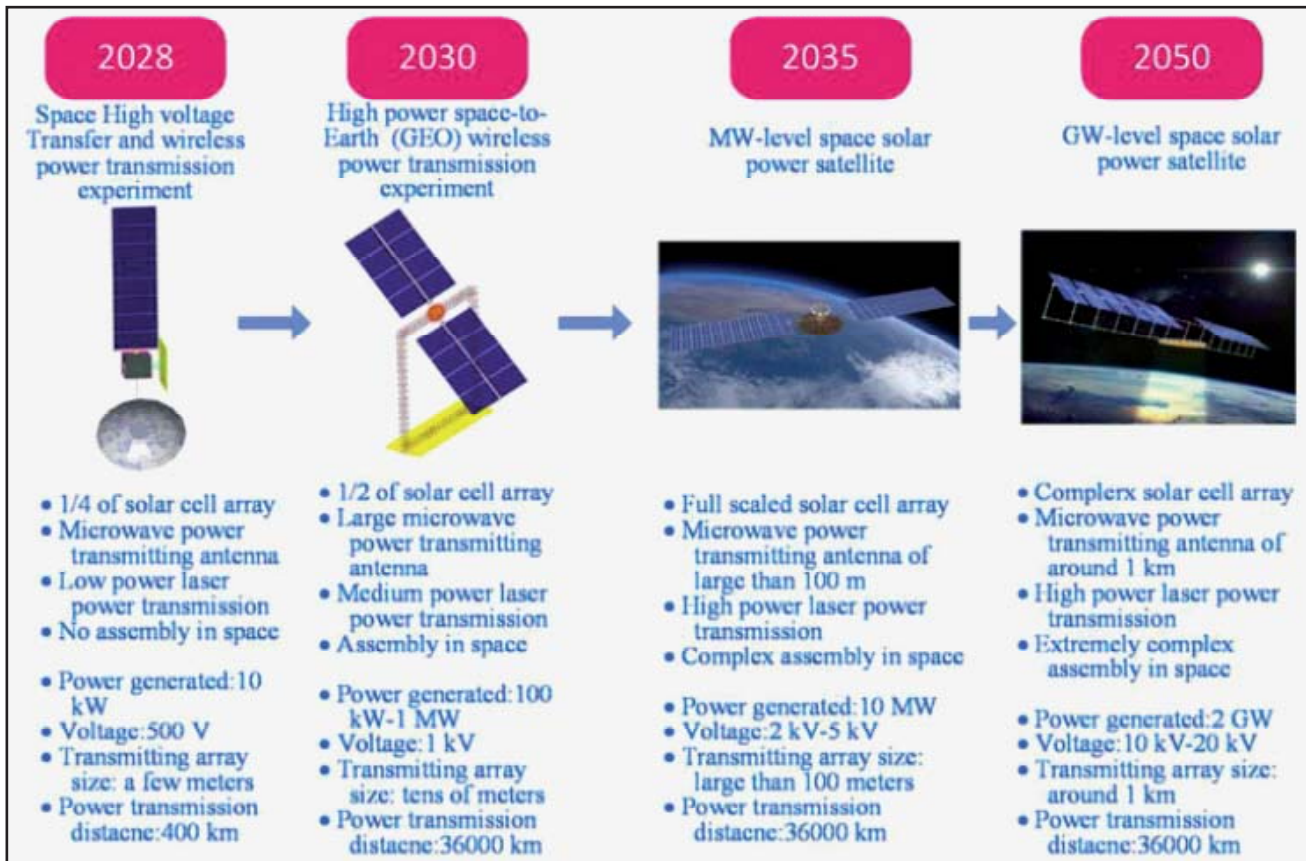
## CHINA TO LAUNCH SOLAR PROBE

### ◎ CONTEXT:

China will launch, in October, its first solar probe, which aims to study the relationships between the solar magnetic field, solar flares, and coronal mass ejections (CMEs).

### About:

- The phase 1 test will soon be followed by phase 2 in 2030, which will be launched into geostationary orbit and will require precise energy transfer over a distance of 35,800 kilometers to Earth.
- The second mission could produce up to one megawatt of power. It will have much larger transmission arrays and medium-power laser power transmission and will need to be assembled in orbit.



- Phases 3 and 4, scheduled for 2035 and 2050, respectively, call for significant increases in energy generation and transmission (10 MW and 2 gigawatts), orbital assembly capabilities, beam steering accuracy, and transmission architecture.
- The four-phase project could help China achieve its energy security and carbon neutrality goals. The updated strategy is apparently in response to domestic and international development trends as well as technology advancements.

### Sun's Corona

- The corona is hotter than the surface of the sun.
- The corona gives rise to the solar wind, a continuous flow of charged particles that permeates the solar system.
- Unpredictable solar winds cause disturbances in our planet's magnetic field and can play havoc with communications technology on Earth.
- NASA hopes the findings will enable scientists to forecast changes in Earth's space environment.

### Other Missions to the Sun

- **NASA's Parker Solar Probe's** aim is to trace how energy and heat move through the Sun's corona and to study the source of the solar wind's acceleration.
- It is part of NASA's 'Living With a Star' programme that explores different aspects of the Sun-Earth system.
- The earlier **Helios 2 solar probe**, a joint venture between NASA and space agency of erstwhile West Germany, went within 43 million km of the Sun's surface in 1976.
- The **Indian Space Research Organization (ISRO)** is preparing for its first scientific expedition to study the Sun, **Aditya-L1**.

**SECTION: D**  
**(QUICK BYTES)**

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**CURRENT AFFAIRS**

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## BALAMANI AMMA, GRANDMOTHER OF MALAYALAM LITERATURE

◎ **CONTEXT:** Google Doodle celebrated the 113th birthday of famous Indian poet Balamani Amma, known as the grandmother of Malayalam literature.

### About Balamani Amma:

- Balamani Amma, the grandmother of **Malayalam literature**, was born on 19 July 1909 in Thrissur district.
- She continues to be known as the '**amma**' (mother) and '**muthassi**' (grandmother), of Malayalam poetry.
- Balamani Amma **never received any formal education**.
  - She was taught at home by her uncle Nalappat Narayana Menon, who was also a famous Malayali poet.
- Balamani Amma was also the mother of Kamala Das.
  - **Kamala Das** was **nominated for the Nobel Prize in Literature in 1984**.



- She passed away in 2004 and was **cremated with full state honours**.
- Work:
  - Her **first poem**, titled **Kooppukai**, was published in **1930**.
  - Her most famous works include **Amma (1934)**, **Muthassi (1962)**, and **Mazhuvinte Katha (The Story of the Axe) (1966)**.

### Recognition:

- Amma was the recipient of various awards and honours like the
  - **Padma Bhushan**, India's third highest civilian honour, in 1987;
  - the **Sahitya Akademi Award** for Muthassi in 1965;
  - the **Saraswati Samman** for Nivedyam in 1995
- The Kochi International Book Fair gives a cash prize for writers in her name, the **Balamani Amma Award**.



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## INDIA CUTS WINDFALL TAX ON FUEL EXPORTS

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◎ **CONTEXT:** The Indian government has cut the recently imposed cesses and levies on diesel and aviation turbine fuel (ATF) and removed the cess on exports of petrol.

### What is Windfall Tax?

- A windfall tax is a **higher tax rate** on sudden big profits levied on a particular company or industry.
- Domestic producers sell crude oil to domestic refineries at international parity prices, thus making windfall gains.

### Background

- Due to the **Global crude prices** are rising and domestic crude producers were making **windfall gains**, the government is trying to back the economy from recession.
- Private oil marketing companies were exporting petrol and diesel to foreign countries like Australia for better realisation.
- The shortage of fuel at retail outlets because of the oil marketing companies were not willing to sell the commodity at a loss since prices had not increased despite rising crude and **depreciating rupee**.

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## FIRST GENETICALLY MODIFIED COWPEA IN GHANA

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◎ **CONTEXT:** Genetically modified (GM) cowpea has cleared the first of the three regulatory hurdles in the way of commercialisation in Ghana.

- **If it is commercialised, it will be the first GM crop grown in the country – a major milestone.**

### What is Cowpea?

- Cowpea, a black-eyed pea in some parts of the world – is a major source of protein in Ghana and the rest of the sub-continent.
- It is a staple and is integral to Ghana's food security.
- Ghana is the **fifth largest producer** of cowpea in Africa.
- Especially in the northern part of Ghana, where it is second to groundnut in terms of area cultivated.
- Farmers of the area face many challenges, including an array of pests.
- The GM cowpea has been genetically engineered to resist the '**Maruca pod borer**' - the major pest in the region.
- The GM resistance will help decrease the amount of insecticide farmers have been using to control pests and increase yields.
- Insecticides are known to be deleterious to human health, but their use is on the rise throughout Africa.

#### About Maruca pod borer

- Maruca vitrata is a **pan-tropical insect pest** of leguminous crops like pigeon pea, cowpea, mung bean and soybean.



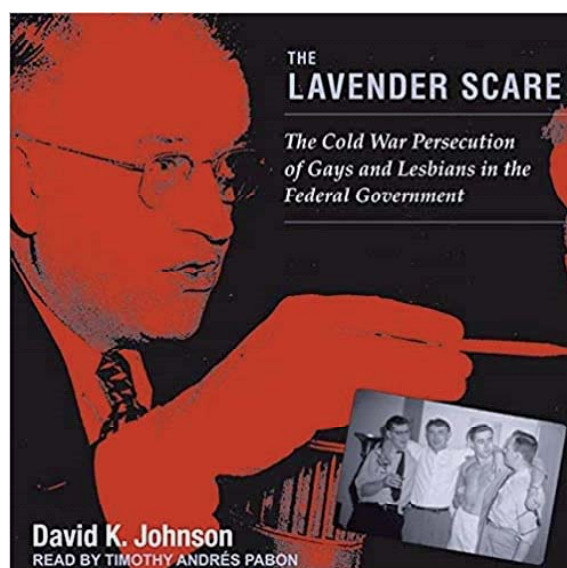
- Its common names include the maruca pod borer, bean pod borer, soybean pod borer, mung moth, and the legume pod borer.
- The species was first described by **Johan Christian Fabricius** in 1787.
- It can cause losses of **20–80%** on the harvests of **cowpeas**.
- Its feeding sites on plants are **flower buds, flowers and young pods**.

## NASA'S JAMES WEBB SPACE TELESCOPE FACING CRITICISM FROM LGBTQ COMMUNITY

© **CONTEXT:** NASA's James Webb Space Telescope, has come under intense criticism from the LGBTQ community for its name.

### What was the Lavender Scare?

- The Lavender Scare was the marginalisation of LGBTQ employees working in the US government's offices during the 1950s and 1960s.
- It is often described as a "witch-hunt", where those suspected of being from the LGBTQ community were fired from their jobs.
- Under President Dwight D. Eisenhower's Executive Order 10450, the investigation, interrogation and systematic removal of gay men and lesbians from the federal government became policy.
- The policy was based on the unfounded fear that gay men and lesbians "posed a threat to national security because they were vulnerable to blackmail and were considered to have weak moral characters.



### Who was James Webb?

- James Edwin Webb was an American government official who served as Undersecretary of State from 1949 to 1952.
- He was also the second appointed administrator of NASA.
- Webb led NASA from the beginning of the Kennedy administration through the end of the Johnson administration, thus overseeing each of the critical first crewed missions throughout the Mercury and Gemini programs until days before the launch of the first Apollo mission.
- He also dealt with the Apollo 1 fire.
- In 2002, the Next Generation Space Telescope was renamed the James Webb Space Telescope as a tribute to Webb.



### What was his role in Lavender Scare?

- James Webb, as the head of NASA during that period, is alleged to have played a role in the dismissal of LGBTQ employees for their identity.
- In 2021, four astronomers in the US wrote about the demand for renaming the telescope in 'Scientific American'.
- There is also an argument that Webb did not personally seek to remove the employees, but was merely following a government directive at the time.
- However, others say that whatever his role may have been, the sackings undoubtedly happened under his watch.

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## PRESTIGIOUS J.C. DANIEL AWARD FOR FILMMAKER K.P. KUMARAN

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© **CONTEXT:** Malayalam filmmaker KP Kumaran has been honoured with Kerala's highest film award, the 'JC Daniel Award'.

### Key Points

- The **JC. Daniel Award** is Kerala's highest award in Malayalam cinema.
- The Government of Kerala created the award to commemorate the contribution of Indian filmmaker J. C. Daniel, who is often regarded as the "**father of Malayalam cinema**".
- It is presented annually by the **Kerala State Chalachitra Academy**, a non-profit institution under the Department of Cultural Affairs of the Government of Kerala, India.
- Recipients are selected by an independent jury established by the Academy and the Department of Cultural Affairs.
- As of 2019, the honourees receive a statuette, a citation, and a cash prize of **500,000**.
- They are honoured at the **Kerala State Film Awards ceremony**.
- The award was **first presented to** film distributor and producer **E. Vasudevan** in 1992.

### About

- Kumaran won the award for his contribution to the **Malayalam film industry**.
- He is a **philosopher, poet, social reformer and an industrialist**.

- The award comprises of a cash prize of Rs 5 lakh, a citation, and a plaque.
- The filmmaker made his directorial debut with **Athithi** in 1975.
- He earned fame for his films like **Rugmini**, which won the National Award for Best feature film in Malayalam and the Kerala State Film Award in
- He is also known for films like **Thenthulli, Laxmivijayam and Thottam**.

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## P.V. SINDHU WINS SINGAPORE OPEN

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◎ **CONTEXT:**

PV Sindhu won the first Super 500 title of her career when she defeated reigning Asian champion Wang Zhi Yi of China in the final of the Singapore Open.

**About:**

- Indian badminton star PV Sindhu won the women's singles title at the Singapore Open 2022 BWF Super 500 tournament after beating Chinese shuttler Wang Zhi Yi.
- This is her first 500 or better since the world championship win in 2019. This is her first 500 or better final in 2022.
- This is an important marker for the world No 7 while the rankings are still frozen.
- This was two-time Olympic medallist PV Sindhu's third title of the year.
  - The earlier two, the Syed Modi International in January and Swiss Open in March.
- **Other Singapore Open title winner:**
  - The last time an Indian won the Singapore Open was in 2017 when B Sai Praneeth clinched the men's singles title.
  - Saina Nehwal won the women's singles title in 2010.

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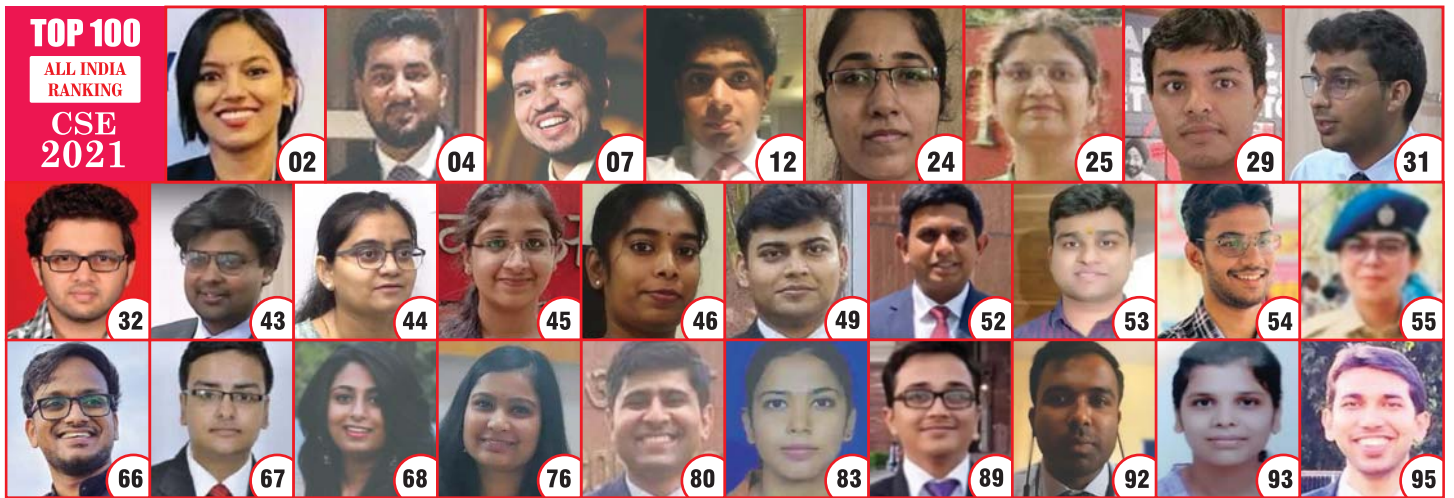
- ☑ GS Mains Advance
- ☑ Applied GS
- ☑ Ethics Integrity & Aptitude
- ☑ Essay Writing
- ☑ GS Paper 2
- ☑ GS Paper 3

### TEST SERIES

- ☑ Prelims Test Series
- ☑ GS Mains Test Series
- ☑ Essay Test Series
- ☑ Ethics Test Series
- ☑ Optional Test Series
  - Political Science
  - Geography
  - History
  - Public Administration
  - Anthropology
  - Sociology

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