

CURRENT AFFAIRS

WEEKLY

WEEK: 4

AUGUST
2021

MAINS

GS-I

Caste Census in the times of changing social equations

GS-II

Tribunals Reforms Bill, 2021

GS-III

A new endgame in Afghanistan

GS-III

Plastic waste management rules on beating Plastic Pollution

GS-IV

Fairness of Intellectual Property Waiver For Covid-19 Vaccines

PRELIMS

HISTORY & CULTURE

- Subhadra Kumari Chauhan, honoured by Google Doodle
- Tiwa Tribe celebrated Wanchuwa Festival

INTERNATIONAL RELATIONS

- 5th meeting of BRICS Industry Ministers
- India collaborates with UN launches tech platform for peacekeepers

ECONOMY

- PM Gati Shakti Master Plan
- RBI to put in place a "PRISM" to strengthen compliance by lenders

ENVIRONMENT

- A third of India's coastline underwent erosion in 28 years:
- Ministry of Earth-Sciences -
- Four more sites of India added to Ramsar list
- *Symplocos Mohananii*, a new plant species discovered in Western Ghats

SCIENCE & TECHNOLOGY

- Chandrayaan-2 confirms water on Moon surface

GS SCORE

An Institute for Civil Services

www.iasscore.in

— **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.

CURRENT AFFAIRS ANALYST

WEEK- 4 (AUGUST, 2021)

CONTENTS

Section - A: MAINS CURRENT AFFAIRS			
Area of GS		Topics in News	Page No.
GS I	SOCIETY	• Caste Census in the times of changing social equations	02
GS II	POLITY & GOVERNANCE	• Tribunals Reforms Bill, 2021	08
	INTERNATIONAL RELATIONS	• A new endgame in Afghanistan	07
GS III	ENVIRONMENT	• Plastic waste management rules on beating Plastic Pollution	09
GS IV	ETHICS	• Fairness of Intellectual Property Waiver For Covid-19 Vaccines	11

Section - B: PRELIMS CURRENT AFFAIRS			
Area of GS		Topics in News	Page No.
GS I	HISTORY & CULTURE	• Subhadra Kumari Chauhan, honoured by Google Doodle	15
		• Tiwa Tribe celebrated Wanchuwa Festival	16
GS II	POLITY & GOVERNANCE	• 5th meeting of BRICS Industry Ministers	17
		• India collaborates with UN launches tech platform for peacekeepers	19
GS III	ECONOMY	• PM Gati Shakti Master Plan	20
		• RBI to put in place a "PRISM" to strengthen compliance by lenders	20
		• A third of India's coastline underwent erosion in 28 years: Ministry of Earth Sciences	21
	ENVIRONMENT	• Four more sites of India added to Ramsar list	23
		• Symplocos Mohananii, a new plant species discovered in Western Ghats	24
	SCIENCE & TECHNOLOGY	• Chandrayaan-2 confirms water on Moon surface	25

OUR CLASSROOM & ONLINE COURSES

GS FOUNDATION

- ☑ 1 Year IAS Foundation
- ☑ 3 & 2 Year IAS Foundation
- ☑ GS Mains Foundation

OPTIONAL FOUNDATION

- ☑ Political Science
- ☑ History
- ☑ Geography
- ☑ Public Administration
- ☑ Anthropology

MAINS COURSES

- ☑ GS Mains Advance
- ☑ GS Mains QIP
- ☑ Ethics Integrity & Aptitude
- ☑ Essay Writing
- ☑ 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

SECTION: A

(MAINS)

CURRENT AFFAIRS

CASTE CENSUS IN THE TIMES OF CHANGING SOCIAL EQUATIONS

CONTEXT

The 2021 Census of India, the 16th Indian Census, will be taken in 2021. But the growing demands for a caste census from various sections of society have once again surfaced the issue like its immediate need and long-term repercussions.

◎ BACKGROUND

- The origin of the Census in India goes back to the colonial exercise of **1881**.
- Census has evolved and been used to-
 - ▶ capture the Indian population
 - ▶ access resources
 - ▶ map social change
 - ▶ delimitation exercise, etc
- However, as early as the 1940s, W.W.M. Yeatts, Census Commissioner for India for the 1941 Census, had pointed out that there shall be no All-India caste table in the 1940s due to enormous expenditure in World War II.

Caste Census & its actual origin

- The caste census is often linked British era of “**Divide and Rule**”.
- But is a beautiful piece of information to know that some 200 years before British rule, between 1658 and 1664, the home minister **Munhata Nainsi** of the **Marwar kingdom**, ruled by **Maharaja Jaswant Singh Rathod** conducted the first caste census.

- Every Census until 1931 had a mention of data on caste.
- Every Census in independent India from 1951 to 2011 has published data on SC and ST, but not on other castes.
- SECC is meant to canvass every Indian family, both in rural and urban India, and ask about their:
 - ▶ Economic status, so that allow Central and State machinery can come up with a range of indicators of deprivation, permutations, and combinations of which could be used by the state to define a poor or deprived person.
 - ▶ To allow the government to segregate which caste groups were economically worst off and which were better off.
- SECC has the potential to allow for a mapping of inequalities at a broader level.
- The **Mandal Commission came up with the estimates of the OBC population at 52%** using methods of extrapolation.

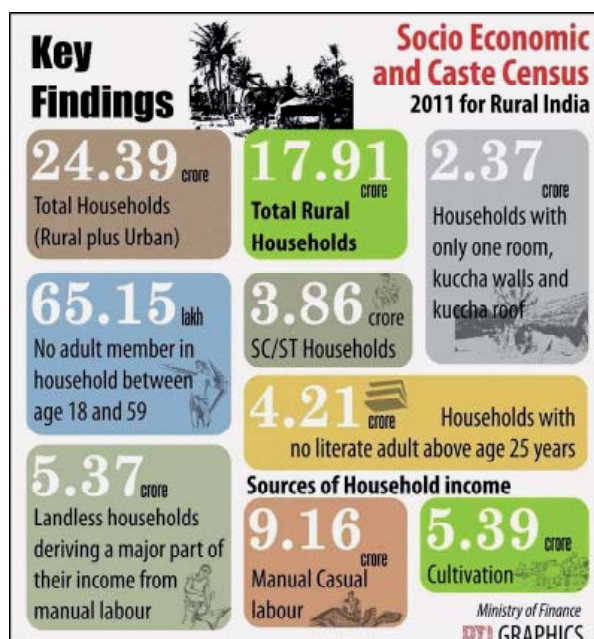
◎ ANALYSIS

Caste Enumeration in Census:

- The **15th edition of the Indian Census, 2011** had taken into account the data of population-based on **Socio-Economic and Caste Status** for the first time after 1931.
- As the enumeration was based on self-declaration, it resulted in hundreds of thousands of caste/sub-caste categories.
- Every census from **1951 to 2011** has published data on **Scheduled Castes and Scheduled Tribes, but not on other castes**.

Socio-Economic and Caste Census (SECC)

- In 2011, the Socio-Economic and Caste Census was conducted for the first time since 1931.



What happened to the SECC 2011 data?

- The **SECC exercise was done** by the **Ministry of Rural Development in rural areas and the Ministry of Housing & Urban Poverty Alleviation in urban areas**.
- The data of **Socio-Economic and Caste Census** excluding caste data was published by the two ministries in the year 2016.
- The crude caste data was given to the Ministry of Social Justice and Empowerment, which formed an Expert Group under Arvind Panagariya for the classification and categorisation of collected data.
So far, no such report has been made public.

The measure took by the Government after Independence:

- In **1953 Kaka Kalekar Commission** (under Article 340) was formed to investigate the conditions of socially and educationally backward classes within the territory of India.
- In **1979 Mandal Commission** (under article 340), was established for the Socially and Educationally Backward Classes Commission (SEBC), with a mandate to "identify the socially or educationally backward classes" of India.
- In **1992**, Indra Sawhney the Supreme Court held that should be in place a permanent body to look into the matter of inclusion and non-inclusion of groups, classes and Sections of Other Backward Classes.
- In **2018, NBCC (National Commission for Backward Classes)** was made a constitutional body (123rd constitutional amendment bill 2017 and 102nd amendment 2018 in the constitution to make it a constitutional body).
 - 102nd Constitution Amendment Act inserted new Articles **338B and 342A**.
 - **Articles 338B:** provides authority to NCBC to examine complaints and welfare measures regarding socially and educationally backward classes.
 - **Articles 342A:** empowers President to specify socially and educationally backward classes in various states and union territories
 - The amendment also brings about changes in **Articles 366**.

Rohini Commission

- The Rohini Commission was constituted in **October 2017** (Article 340 of the Constitution) to submit its report on the **Sub-categorisation of Other Backward Classes (OBCs)**.

Why do we need a census to be done?

- In order to better understand the population of society and what people have access to, and what they are excluded from.
- It is relevant not only for social scientists but also for policymakers and academicians.
- The Census of India enumerates and collects demographic and socio-economic data on the Indian population.

Associated Concerns with SECC

• Arguments against the Caste Census:

- **Fear of breaching the 50% ceiling for a caste-based reservation:** It is argued that a Socio-Economic Caste Census is the only way to make a case to breach the 50% cap on the reservation.
- **Procedural Issues:** As per the central list, the total number of OBCs in the country stands at 6,285, while the number further increases to 7,200 if the list is prepared by the states, and UTs are taken into consideration. (*Though the Rohini commission is in place to look into the sub-categorisation of the OBC's.*)
- **Social fragmentation:** Caste identification can lead to friction amongst various classes and can result in an increased caste enmity. There have been concerns that caste census may result in a society with reinforced identities. It is being argued that counting caste will perpetuate it further deeper.
- **Partial benefits:** The way reservation is practised in the country; it has invariably led to elites among castes and communities.
- **Opposition from religious groups:** The resistance to the caste census is not only coming from the Hindus; Muslims, Christians and Sikhs are also scared, since there exist castes even in these communities and the Dalit Muslim, the Dalit Christian and the Dalit Sikh are catching up on the fight for their rights.
- **Vulnerable open-ended categories:** There are certain open-ended categories in the lists such as **orphans and destitute children**. The cases of a migrant from one State to another and the **status of children from inter-caste marriages**, in terms of caste classification, are also related questions.

• Positive outcomes of the caste census

- **Bringing the marginalized to the table:** A caste census brings up the number of people who are at the margins. There are many of such castes which are still **nomadic** and is deprived of identity and development.

- ▶ **Data for Policymaking:** This information is important for any democratic policymaking agency. A caste census would bring up the **anthropological facts**, and on the other, provide the basis for framing relevant development policies required for social justice.
- ▶ The **consumer expenditure survey (68th round)** and the **Socio-Economic and Caste Census (SECC) 2011** are the base of welfare schemes such as the ones for LPG cylinders and rural housing. **There's been no update to this database which is worrisome.**
- **Backing by the judiciary:** Legislations of many States on reservation policies for SEBC and OBC had been struck down by the courts on the ground that, the policies on the reservation is made without supporting the scientific database of the SEBC and OBC population. So the detailed enumeration of SEBC and OBC should be made by the Centre.
- **Caste doesn't marginalize:** We need to do away with the idea of caste applying to only disadvantaged people, poor people, people who

are somehow lacking. Counting of caste doesn't necessarily strengthen caste or the caste system. Myths of caste-elitisms can only be debunked through a caste-based census.

◎ CONCLUSION:

- The most important thing is **improving existing databases is more crucial to this than getting into the debate of whether to do a caste count or not. Accurate and timely data is central to India's effort to tackle poverty. Poor data diminishes the efforts to design welfare programmes.**
- The **National Commission for Backward Classes (NCBC)** among many has sought caste census for Other Backward Classes (OBCs). It's the right time that the Central government consider the benefits, welfare and all-around upliftment of the SEBC and OBC categories of population after collection of scientific databases through General Census 2021.

TRIBUNALS REFORMS BILL, 2021

CONTEXT

Lok Sabha recently passed the Tribunals Reforms Bill, 2021 to dissolve at least eight courts.

The Bill

- The Bill replaces the Rationalization and Conditions of Service Ordinance, 2021, which was repealed by the High Court.
- Eight courts were disbanded, which served as the bodies of appeals to hear disputes under various conditions, and
- Appeal to existing tribunals such as a civil court or a High Court
- Chairpersons and Members of the Judiciary are terminated by termination of office, with compensation equal to 3 months' salary and benefits for their early termination.

Additional information

What are tribunals?

- The Tribunal is a quasi-judicial institution set up to deal with issues such as resolving administrative or tax-related disputes. It performs many functions such as resolving disputes, determining rights between opposing parties, making administrative decisions, reviewing existing decisions to govern and so on.

Constitutional Provisions:

- They were not part of the Constitution at first.
- Amendment Act 42 introduces these provisions in accordance with the recommendations of the **Swaran Singh Committee**.
- The amendment introduces **Part XIV-A** in the Constitution, which deals with 'courts' and contains two articles:
 - **Article 323A** deals with administrative courts. These are judicial institutions that resolve disputes related to employment and the conditions of service of public servants.
 - **Article 323B** deals with the courts of other jurisdictions such as Tax, industrial and labour, Foreign Exchange, Import and Export, Land Reform, Food, Urban Roofing, Elections in Parliament and State Legislatures, Employment and Employment Rights.

Key Provisions of the bill

- **Dissolution of Existing Bodies:** The Bill seeks to eliminate certain appeal bodies and transfer their functions to other existing judicial bodies. For example, disputes heard by the Film Certification Appellate Tribunal will be resolved by the Supreme Court.
- **Consolidation of Existing Bodies:** The Finance Act, 2017 includes court-based courts. For example, the Competition Appellate Tribunal is affiliated with the National Company Law Appellate Tribunal.
- **Candidate Selection Committees:** The Chairperson and Members of the Courts will be elected by the central government on the recommendations of the Search-cum-Selection Committee. The Committee will consist of:
 - The Chief Justice of India, or the Judge of the Supreme Court nominated by him, as Chairperson (by casting vote).
 - Two secretaries nominated by central governments.
 - The incumbent Chairperson, or a retired High Court Judge, or a retired Chief Justice of the High Court, and
 - Secretary of the Department under which the Tribunal is located (excluding the right to vote).
- **State Administrative Courts:** Will have separate search electoral committees and the Chief Justice of the Supreme Court of the country concerned, such as the Chairperson (by a casting vote).
- **Eligibility and Term of Office:** The Bill provides for a term of four years (subject to a maximum of 70 years for the Chairperson, and a maximum of 67 years for members).
 - In addition, it specifies a minimum age requirement of 50 years for the appointment of a chairperson or member.
- **Removal of Councillors:** It states that the central government, on the recommendation of the Select Committee of Investigators, removes the Chairperson or Member.

What was the Court's decision and what are the key issues with the Bill?

- Supreme Court in the case of **Madras Bar Association v. The Union of India** has set a minimum requirement for a minimum of 50 years

of office and membership and defines a term of four years.

- It said such conditions violate the principles of separation of powers, freedom of law, law and **Article 14** of the Constitution of India.

Problems associated to it:

- The Bill attempted to reverse the decision of the High Court in terms of the following provisions:
- The minimum requirement for 50 years still finds its place in the Bill.
- The term of office of the Chairperson and members of the court is four years.
- The two-word recommendation for each post is the Search-cum-Selection Committee and requires a better government decision within three months.

Issues Raised by Supreme Court

- Recently, the Supreme Court of India (SC) has challenged the government to produce material showing its reasons for introducing the Tribunal Reforms Bill of 2021.
 - **Unconstitutional Violations:** There was no discussion of the bill, and the government re-enacted the same principles as those overturned by the Court in the case of the Madras Bar Association (2021). This is similar to the "unconstitutional repeal of the law" of the judgment passed by SC.
 - **Repeated Violations of SC Orders:** The Center does not follow repeated instructions issued by the Court to ensure the proper functioning of the Courts. The provisions of the Act relating to the conditions of service and the appointment of Councilors and the Chairperson have been overturned by the High Court.

- **Security of Tenure:** The Tribunals Reforms Act, 2021 prohibits the appointment of persons to the courts of persons under the age of 50 years. It undermines the length / security of hiring.
- **It undermines the separation of powers:** This bill allows the Central Government to decide on recommendations made by the Electoral Committee, preferably within three months from the date of such recommendation. Section 3 (7) of the bill authorizes the recommendation of a two-word panel by the search-cum selection committee in the Central Government, violating the principles of separation of powers and legal independence.
- **Vacancies in Courts:** India now has 16 courts including the National Green Tribunal, the Armed Forces Appellate Tribunal, and the Debt Recovery Tribunal and, among other things, suffers from disability. The presence of a large number of vacancies for Members and Chairpersons and excessive delays due to their filling have led to the weakening of the courts.
- **Damage to the Decision-Making Process:** These cases will be referred to the higher courts or commercial courts as soon as possible.
- Lack of expertise in ordinary courts can disrupt the decision-making process.
 - **For example, the Film Certification Appellate Tribunal (FCAT)** only heard decisions that contradicted the decisions of the review board, which requires expertise in the arts and cinemas.
 - In addition, the dissolution of certain courts and the bodies of appeals, and the transfer of their functions to the Supreme Court can be criticized for the fact that the Indian courts are already heavily burdened with their existing cases.

A NEW ENDGAME IN AFGHANISTAN

CONTEXT

The fall of Kabul, and the disgraceful end of any resistance to the Taliban within six weeks of U.S. forces leaving the Bagram airport (near Kabul) on July 2, it was revealed how the Afghan Security Forces were misleading.

The present situation

- The departure of Afghanistan President Ashraf Ghani and almost the entire top political leadership of Afghanistan to safer havens, removes the last vestige of hope that the Taliban can be checked.
- Afghanistan today is in a condition that is far worse than what existed when the Russians withdrew in the 1990s.
- In the 1990s, the Taliban were a band of outlaws. But today, they are recognised by powers such as the U.S., Russia, and China, and are on the brink of gaining a country.
- In the 1990s, Russia had to contend with a superpower (the US) to hold the region. But this time, the US withdraws from Afghan without any credible outside power.

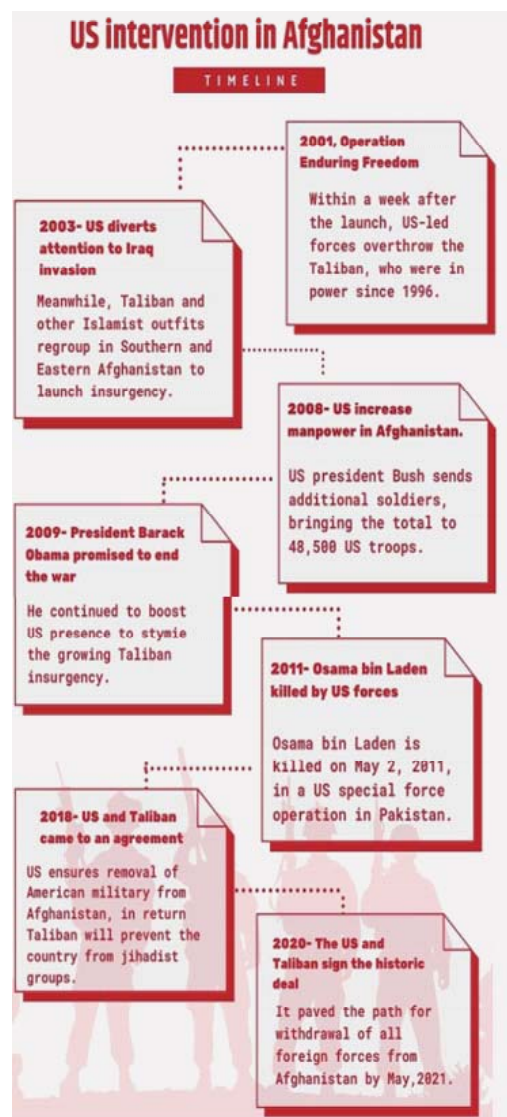
Older threats may also appear:

- Some political analysts seem to believe that after the initial success of the Taliban and the fall of Afghanistan, the region's natural political power could be strengthened.
- After two decades of involvement in Afghanistan, and spending more than a billion dollars on terrorism and al Qaeda, the US has left Afghanistan in a much worse position than it did.
- It is impossible to see any decline in terrorism or the death of any of the best-known terrorist groups, such as al Qaeda and the Islamic State (IS), or that story, of lesser-known terrorist attire.
- In fact, there has been a resurgence in al Qaeda IS operations, after some previous setbacks, have reunited and are now becoming a real threat to the affected areas, including Afghanistan.
- The radicalized fear of Islam and the power of the 'doctrinaire theocracy' became powerful, if any, that way. The fall of the Afghan state will unleash many ancient threats.
- Compared to a situation where the U.S. Leaving Vietnam in 1975, which was also seen by many as a kind of 'retreat', the Afghan 'misadventure' became a disaster.
- Under the leadership of the Communist Party, Vietnam was able to emerge as a vibrant, prosperous nation.
- Under the Taliban regime, Afghanistan cannot expect such results. It will remain the 'sick Asian

man' for generations to come, the folly of standing in danger of foreign interference in foreign affairs.

How did the US decision to withdraw affect it?

- The US has long wanted a decent exit. U.S. decision Withdrawal (after the Doha agreement) leads to three important signs.
- The US has failed to protect the interests of the Afghan people.
- The Americans had acknowledged the rise of the Taliban with a view to the safe passage of their troops.



- In 2001, the US decided to take up the global war of terror. From Afghanistan, the US passed through Iraq, Libya and Syria. It all has mixed effects.
- All of this has tarnished the image of the U.S. in Asia. In view of this, the US claim to 'make America great and' sounds almost impossible..

Taliban take over and implications for India

- The occupation of the Taliban by Afghanistan has significant consequences for South Asia, starting with the speed of refugees in Pakistan can be seen soon on its western borders.
- But few countries in the region are as vulnerable to the future of Afghanistan as India, its fifth largest donor and one of the most active.
- India now finds most of its critical investment in human and physical infrastructure in Afghanistan at risk as the Taliban take control.
- Worse, the problem that follows the U.S. withdrawal. It leaves India's foreign policy and security at great risk on both sides.
- The new Taliban government is likely to promote security zones for anti-Indian terrorist groups and other groups that could sow unrest in India-controlled Kashmir.
- Meanwhile, China's willingness to work with the Taliban could increase its track record in the region.
- Over the past two decades, India has been one of the most important donors to Afghanistan, providing scholarships to Afghan students, providing food aid, and helping to restore the country's energy grid that has been devastated by wars.
- But based on its previous experience with the Taliban government, India's security zone now faces growing fears of its own interests in the country.
- Without public support by the Taliban, Afghanistan could also emerge as a regional terrorist destination.
- When they were in power before, the Taliban liberated a number of anti-Indian terrorist groups in Afghanistan, most notably Jaish-e-Mohammed (JeM) and Lashkar-e-Taiba.
- Safe areas allowed these organizations to regroup, be trained, and cause damage to the Indian-controlled Kashmir, a place of long-standing rebellion.

Challenges with Taliban in power

- Taliban might renew the support for international terrorism.
- Pakistan might redirect the jihadi groups that fought with the Taliban towards India. Pakistan-based jihadi groups might turn their attention to Kashmir.
- Further, the Taliban will also face troubles in balancing their religious ideology with the imperatives of state interests.

Suggestions for India

- **Fast action:** India should safely remove Indian communications workers and other citizens from Afghanistan. This will require a great deal of effort.
 - ▶ The Indian government must also provide asylum to those Afghans who have worked with Indian programs and are keen to avoid repatriation from the Taliban.
- **Communication systems:** India must make every effort to get the international community to hold the Taliban in their favour by allowing all foreigners to travel in peace, protect the lives of all Afghan citizens, and respect international humanitarian law.
 - ▶ India also chairs the UNSC Taliban Penalty Committee. It will play a key role in shaping the international response to the Taliban's demand for the lifting of sanctions against its leaders.
 - ▶ Similarly, India should also enable the international community to provide assistance to the many Afghan people left behind by the war.
- **Home programs:** India must remain vigilant against the emergence of cross-border terrorism that could stabilize Kashmir and escalate tensions between India and Pakistan.

◎ CONCLUSION

The situation in Afghanistan indicates a major setback in India. Afghanistan under Taliban will remain 'Asian sick man' for generations to come. Because, forcibly taking over the country is one thing, but managing it successfully is another matter.

PLASTIC WASTE MANAGEMENT RULES ON BEATING PLASTIC POLLUTION

CONTEXT

- The central government introduced the Plastic Waste Management Amendment Rules which recognizes the severity of pollution caused by plastic labels for daily use.
- The decisions follow recommendations made by an expert group constituted by the Department of Chemicals and Petrochemicals two years ago.

Cleaning up

Plastic items completely banned from July 1, 2022

Ear buds with plastic sticks, plastic sticks for balloons, plastic flags, polystyrene (thermocool) for decoration, plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays, wrapping or packing films, cigarette packets

Plastic bags to be thicker

From September 30 this year, thickness of plastic carry bags has been increased from 50 microns to 75. From December 31, 2022, the thickness will increase to 100 microns

How big is this plastic issue?

- Plastic is a synthetic polymer made of gasoline with structures suitable for various uses, including packaging, construction and construction, household and sports equipment, automobiles, electronics and agriculture. Plastic is cheap, lightweight, strong and soft.
- More than 300 million tons of plastic are produced annually, half of which are used to design consumer goods, such as shopping bags, cups and straw.
- Only 9% of recycled plastic waste. About 12% burned, while 79% accumulated in landfills.
- According to the International Union for Conservation of Nature (IUCN), at least eight million tons of plastic end up in the oceans every year.

Global Waste Plant Problem:

- Pollution due to the use of plastic materials has become an important environmental challenge facing all countries.
- Only nine percent of the plastic trash produced

between 1950 and 2015 was reused worldwide, according to a study by researchers at the University of California, Santa Barbara, and others.

- 3.3 million tons of Indian waste was recovered in 2018-19.
- This translates to about 9,200 tons per day (TPD). The total amount of municipal waste is 55-65 million tons; plastic waste is about 5-6 percent of the solid waste generated in the country.

Recent steps by India

- Currently, the **Plastic Waste Management Regulations, 2016**, prohibit the manufacture, importation, storage, distribution, sale and use of handling bags and plastic sheets of less than 50 microns in the country.
- The Prime Minister of India was also awarded the "world champion" award by the **United Nations Environment Program (UNEP)** in 2018 for promising to eradicate all once-used plastic by 2022.
- India has pledged to take steps to reduce land pollution caused by Single Use Plastics.

- India has generated 34 lakh tonnes of plastic waste in 2019-20, of which only 60% has been recycled
- 6 of the top 100 global producers of polymers which produces large quantity of plastic waste are based in India.
- 22 states in India have announced ban on single use plastic but, it had little impact on outcomes

Plastic Waste Management Amendment Regulations, 2021:

- The Department of Environment has introduced the Plastic Waste Management Amendment Regulations, 2021.
- These laws prohibit certain types of plastic items that are used and have 'low use and high waste disposal capacity' by 2022.
- The permissible size of plastic bags, currently 50 microns, will be increased to 75 microns from September 30, 2021, and to 120 microns from December 31, 2022.
- High-strength plastic bags are easily treated as waste and have high recycling performance.
- At the policy level, the concept of Extended Product Responsibility (EPR), already mentioned under the 2016 Regulations, should be promoted.
- EPR is a policy in which producers are given significant, financial and / or physical responsibility for the treatment or disposal of post-consumer products.
- The Central Pollution Control Board, together with state pollution agencies, will monitor the ban, identify violations, and impose fines already imposed under the Environmental Protection Act, 1986.

Problems with plastic waste management

- In terms of policy- India's environmental policies vary, deliberately good but bad in terms of results
- With regard to government spending in the absence of a strong will from national governments to replace municipal contracts
- Regarding recycling- due to lack of partition, most plastic waste cannot be recycled
- Cold regulation - This has led to a ban on the movement of plastic waste to other provinces with recycling.

Steps So far

- GloLitter Partnerships Project: Launched by the International Maritime Organization (IMO) and the Food and Agriculture Organization of the United Nations (FAO) as well. the first subsidy from the Norwegian Government.
 - Purpose: To prevent and reduce marine plastic waste from shipping and fisheries.

- It will also assist developing countries in reducing marine waste, including plastic waste, from the maritime and fisheries sector, and reducing the use of plastic in these industries.
- Also help identify potential recycling and recycling of plastics.
- Thirty countries including India have joined this global marine pollution program.

- **World Environment Day**, 2018 is held in India, world leaders promise "Beat Beat Pollution" and end its use completely.
- **Specifically, in India:** The Plastic Waste Management Regulations, 2016 states that every local organization must be responsible for establishing infrastructure for sorting, collecting, processing and disposing of plastic waste.
- **Plastic Waste Management Regulations (Amendments):** The 2018 Regulations introduce the concept of Extra Manufacturer Responsibility (EPR).
- Prohibit Single Use Plastics with the aim of liberating India of once-used plastics by 2022.

Suggestive measures

- As consumers, we need to make sure that all the plastic waste that leaves our homes is separated and not contaminated with food waste.
- Handling plastic waste requires practical knowledge, not only for those who manufacture plastic but also for those who use it.
- The owner of the product and the manufacturer must try and understand the penalty for the plastic assembly that you will encounter after its packaging purpose has been used.
- Citizens should bring about a change in behaviour and contribute to non-pollution and help to separate waste and waste management.
- Encouraging innovation in the use of alternative plastics identification methods and digital plastic waste management solutions, India Plastic Challenge - Hack 2020, is designed for students of Higher Education institutions and initiatives known under the Start-up India Initiative.

◎ CONCLUSION

The bulk of the plastic waste cannot be recycled due to the lack of separation, which leads to burns, while mixing new types of plastic compost can confuse the problem. Wet control has led to the ban on plastic crossing State borders. Now that the institution has adopted a comprehensive ban, the ongoing pollution must end. Moreover, Micro plastic has already been found in the food chain, and governments must act decisively to curb this scourge.

FAIRNESS OF INTELLECTUAL PROPERTY WAIVER FOR COVID-19 VACCINES

CONTEXT:

At the beginning of the pandemic, vaccine companies stated that they would make sure low-income countries will have the same access to the vaccine as the rest of the world. A massive global disparity in the allocation of available vaccines is still evident today.

◎ BACKGROUND:

- What is a vaccine patent?
- A patent gives the vaccine manufacturers exclusive rights to prevent others from manufacturing, using, offering for selling or importing the shot/vaccine they develop.

What is bioethics?

- Bioethics is concerned with the questions related to the ethical implications of biological research, and the biological and medical applications of research.

Four commonly accepted principles of Bioethics are:

- Principle of respect for autonomy,
- Principle of nonmaleficence,
- Principle of beneficence, and
- Principle of justice.
- Issues like **freedom of research, access to health care and distribution of health resources, and equitable access to the outcomes of biological research** are closely related to Bioethics.

What is intellectual property protection?

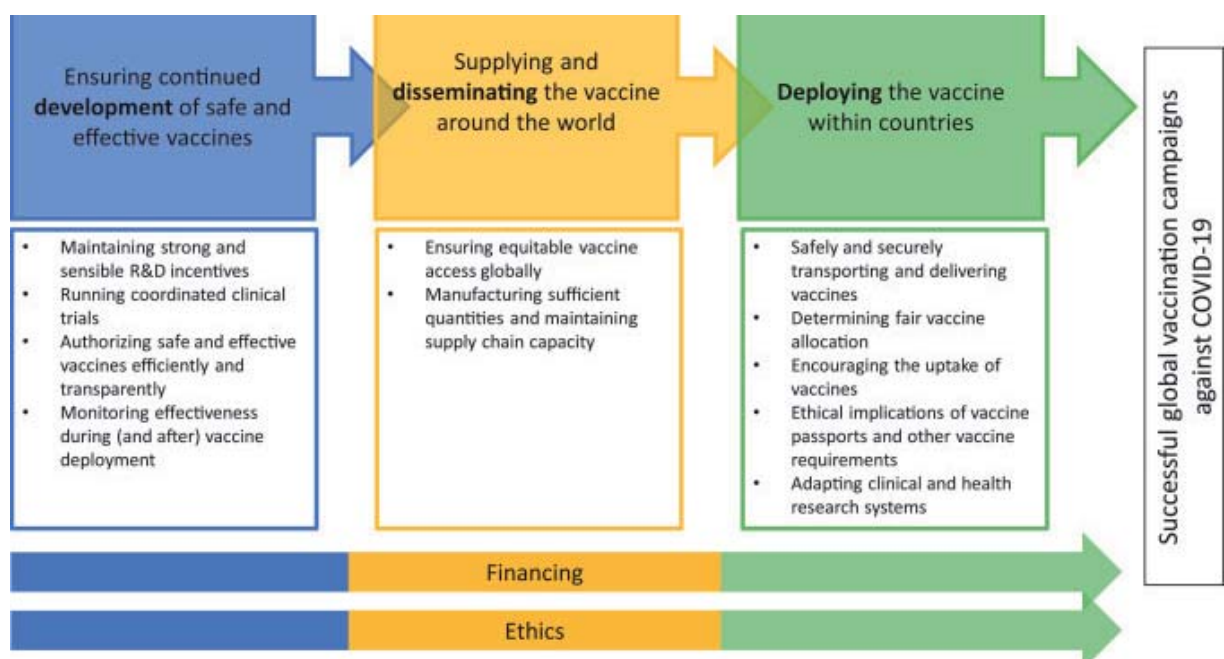
- Intellectual property refers to those legal rights, arising from any intellectual activity in the industrial, **scientific**, literary and artistic fields.
- IP systems provide safeguards to specific well-defined subject matter by giving limited entitlements to the right holders to exclude others from certain uses of the protected material. But an IP right does not give its holder the entitlement to use or market a product.

The mechanism for Waivers under WTO Agreements

- The **Marrakesh Agreement**, which had led to the establishment of WTO provides that a waiver under WTO treaties, such as TRIPS, can be only be decided at the WTO Ministerial Conference.
- The waiver must contain a justification based on the exceptional circumstances. Waivers that are longer than one year will get reviewed by the Ministerial Conference on an annual basis until it gets terminated.

Key points:

- The 1995 agreement on **Trade-Related Aspects of Intellectual Property Rights (TRIPS)** asks



the ratifying countries to adopt the standard of intellectual property rights to protect creators and promote innovation.

- **South Africa and India** have proposed a waiver from the application of certain provisions of the TRIPS Agreement (waiving IP rights like patents, copyright, and trademarks) for prevention, containment or treatment of Covid-19.
- If the proposal for waiver is granted or approved, WTO member countries will not be under any obligation by the law, for a temporary period, to either grant or enforce patents and other IP-related rights to Covid-19 medications, vaccines, and other related treatments.
- This will provide safeguard to the measures adopted by countries to vaccinate their populations from claims of breach under WTO law.

◎ ANALYSIS:

- At the beginning itself, the wealthy countries such as the U.S., Canada, and others figured out the severity of COVID-19, as a result, they proactively engaged in **bilateral agreements with the vaccines producing companies**. This ensured that they will be standing in the front of the line well even before the vaccines were out of the production units.
- The biggest problem is that vaccine manufacturing, R&D takes place in a concentrated group of high-income countries. Companies that are based in these countries, which also happen to be the main IP holders, have sold the bulk of vaccine doses to their own governments, and to governments of other high-income nations which are able to buy it.
- Efforts to ensure vaccines for poorer nations, **such as pledges to COVAX**, came to existence only after the wealthy countries had secured more than enough for them. As a result, the robust vaccine distribution agreements (COVAX) that came were too little and too late.

Vaccine-divide and its Ethical acceptability:

- The pharmaceutical companies putting in years of R&D are supported by high-income countries. With a tunnelled or self-centric approach these countries have the exclusive right to receive their products first.
- If we look at the U.S. which has already vaccinated most citizens is now planning to vaccinate its teenagers, who pose a much lower risk from COVID-19. At the same time, most countries don't even have enough vaccines to protect their frontline workers and their vulnerable elderly populations. To add more, these countries often

lack robust health care systems. There exists a moral imperative for equitable vaccine distribution among everyone.

- **Ethical allocation of health care resources** is important for the **principle of justice**. The principle of justice talks about the moral-obligation to act on the basis of fair judgement between available options. **It is related to fairness, equality and entitlement.**

Supporters of a patent waiver make the following argument:

- Vaccine patent waivers shall allow other countries to produce generic copies of vaccines and this will result in an increase in the global availability of vaccines.
- Increasing the global supply would give developing nations access to vaccines.
- Increasing vaccine access would save lives and decrease the prevalence of future Covid variants, which could prolong the pandemic.
- By looking at this, it appears that maintaining patents violates the **principle of beneficence**, by knowingly refusing to help countries in the times of need.
- It also violates the principle of **non-maleficence**, avoiding harm to others, as patents can demotivate the innovators from other countries from developing a novel vaccine due to the fear of copyright suits.
- The sole aim is to reduce the barriers to countries producing their own vaccines, particularly for low-income countries.

Precedents for patent waivers:

- In 2001, the **"Doha Declaration on TRIPS and Public Health"** eliminated patents on drugs for HIV, which resulted in cost-effective production.
- In the 1980s similar thing happened with the hepatitis-B vaccines. By handing over the formulation/procedure for then existing vaccines, other companies started producing their own versions.
- Doing away with IP (Intellectual property) protections could also free innovators across the globe to develop new vaccines without worrying about **copyright infringement issues**.

Concerns:

The method of using a patent waiver to increase the global supply is debatable.

- **Patent waivers are not enough:** Critics argue that the waiver would not result in an immediate increase in supply, as establishing production facilities for

a new type of vaccine would take months and would ultimately require further assistance from companies in addition to the waiver.

- **Jeopardizing the supply chains:** The waivers have the potential of jeopardizing the existing supply chains. The Pfizer-BioNTech vaccine, for example, requires 280 components from 86 suppliers in 19 countries. This competition for the raw material could possibly slow down the net production.
- **Setback for innovation:** A waiver would discourage future innovation. The mRNA technology utilized by the Pfizer-BioNTech and Moderna vaccines is only possible due to the years of R&D from the public and private sectors.
- **Disincentivise Pharmaceutical Companies:** With no profit incentive to create new vaccines, we may see investments in the industry drop. This could result in a decline in new technologies, leaving humanity underprepared for the next pandemic.
- **Vaccine Quality may get Compromised:** Waiving of patents might result in losing control over the safety and quality standards for vaccine manufacturing.

It's easy to get caught in the debate of a patent waiver, as there are strong arguments for both sides. **What remains relevant is that the issues of:**

- **justice** (equitable distribution)
- **beneficence** (helping other countries) and
- **non-maleficence** (avoiding harm to other countries)

Significance for India:

- **Help in increasing the vaccine production:** The bulk of the vaccine doses produced in India are taken up by foreign countries which are paying more for the doses. This move can in making the vaccines more affordable and scaling up their production to meet the demand.
- **Preparation for the Third Wave:** Indian authorities have stated that the third wave of the pandemic is possible. Addressing shortages of vaccines and making them affordable could be the best way to prepare for the third wave.

SECTION: B

(PRELIMS)

CURRENT AFFAIRS

To Attempt
Weekly Current Affairs Test, Visit

www.iasscore.in

SUBHADRA KUMARI CHAUHAN, HONoured BY GOOGLE DOODLE

◎ **CONTEXT:**

- An illustrated Google Doodle has honoured Subhadra Kumari Chauhan, India's first woman satyagrahi who also wrote the iconic Jhansi ki Rani poem on her 117th birth anniversary.

◎ **ABOUT:**

Subhadra Kumari Chauhan

- **Early life**

- **Birth:** August 16, 1904, in Nihalpur village, Prayagraj.
- **Education:** She attended the Crosthwaite Girls' School and passed middle-school in 1919.
- **Spouse:** She got married to Thakur Laxman Singh Chauhan of Khandwa at the age of just 16.

- **Contribution to India's freedom struggle**

- Both Subhadra Kumari Chauhan and her husband became a part of Mahatma Gandhi's **Non-cooperation movement** in 1921.
- During the struggle, she became the **first woman satyagrahi** to court arrest and was subsequently jailed in Nagpur.
- Subhadra Kumari Chauhan continued to participate in the freedom struggle and joined Mahatma Gandhi's movements in 1923 as well as in 1942.
- In between this period she also became a member of the legislative assembly in what was formerly known as Central provinces.

- **Work**

- Chauhan became a prominent poet and freedom fighter in an age that was dominated by males.
- She used her poetry to boost the morale of the countrymen in their fight for freedom.
- She also highlighted the hardships faced by Indian women including "gender and caste discrimination"
- She died in 1948 in a car accident in Seoni, MP, on her way back to Jabalpur from Nagpur, where she had gone to attend an assembly session.

Legacy

- The country honoured her by naming a coast guard ship after her and the state did so by putting up a statue in **Jabalpur**.
- India Posts released a postage stamp to commemorate her.

Collections of poems

- Jeevan phool
- Jhilmil taare
- Neem
- Tum
- Rakhi
- Koyal
- Iska Rona
- Khilonewala
- Veeron Ka Kaisa Ho Basant
- Tridhara
- Mukul
- YehKadamKaPed
- Seedhe-Saade Chitra (1946)
- Mera naya Bachpan (1946)
- Bikhare Moti (1932)
- Jhansi ki Rani

Short Story

- Hingwala

TIWA TRIBE CELEBRATED WANCHUWA FESTIVAL

- ◎ **CONTEXT:**
- Tiwa tribesmen celebrated the Wanchuwa festival in Karbi Anglong district of Assam.

- ◎ **ABOUT:**
- Wanchuwa Festival:**
- The Wanchuwa festival is one of the most important celebrations in the life of the Tiwa tribe of Assam.
 - With every harvest, it comes with songs, dances, a bunch of rituals and people clad in their native attires.
 - With bamboo sticks in hand, the people proceed to rhythmically beat the rice powder, and occasionally pause to move around the circle.
 - The people of Tiwa tribe associate the bountiful harvest with the **higher power from nature**. This takes the form of pigs' skulls and bones which act as deities and are preserved through many generations.

- ◎ **ABOUT:**
- Tiwa Tribe**
- Tiwa Tribe is a community that centers itself around a traditional form of agriculture.
 - Also known as Lalung, this indigenous community is recognized as a **Scheduled Tribe (ST)** within the state of Assam.
 - The Tiwa community is far removed from the noise and influence of urban chaos.
 - The Tiwas practice **Jhum or shifting cultivation**.
 - Under this kind of cultivation, the land is first cleared of any vegetation that is later set on fire (slash-and-burn).

- The result is a more fertile soil that is freshly enriched with potash, all the more useful for a bountiful crop.
- **States:** Assam, Meghalaya, Arunachal Pradesh and Manipur.
- **Festivals:** The main festivals of the Tiwa tribes are: Three Pisu (Bihu), Borot utsav, Sogra phuja, Wanchuwa, Jonbeel Mela, Kabla, Langkhon Phuja and Yangli Phuja.

Sub-groups of the tribe:

- The tribe is majorly divided into following 2 subgroups, which have contrasting cultural features:
- **Hill Tiwa:**
 - They live in the westernmost areas of Karbi Anglong district.
 - **Language:** Tibeto-Burman language.
 - **Religion:** One-half of them follow their traditional religion. It is based on the worship of local deities. The other half has been converted to Christianity since the 1950s.
- **Plains Tiwa:**
 - They live on the flatlands of the Southern bank of the Brahmaputra valley.
 - **Language:** The vast majority speak Assamese as their mother tongue. Their descent system is patrilineal.
 - **Religion:** Their religion shares many elements with Assamese Hinduism but remains specific.

Important tribes and their festivals	
Tribe	Festival
Angamis	Sekrenyi
Bhils	Baneshwar fair
Bhutia tribes	Losar and Losoong
Garo Tribes	Wangala
Gonds	Keslapur Jathra
Khasis	Nongkrem
Munda tribe	Mage Parab , Ind-Parab Jom-Nagoa or Jom Nawa, Batauli, Kolom Sing, Phagu Festival, Sarhul or Ba Parab ,Karam and Sohrai Festival
Santhals	Karam festival

5th MEETING OF BRICS INDUSTRY MINISTERS

◎ CONTEXT:

- Commerce and Industry Minister Piyush Goyal chaired the fifth meeting of BRICS Industry Ministers and called for expanding the horizon of the New Development Bank (NDB).

◎ ABOUT:

BRICS

- **Founded in:** 2006
- BRICS is the group composed of the five major emerging countries -
 - Brazil
 - Russia
 - India
 - China
 - South Africa
- These countries together represent about 42% of the population, 23% of GDP, 30% of the territory and 18% of the global trade.
- **Subsidiary:** New Development Bank
- **Aim:** The BRICS mechanism aims to promote peace, security, development and cooperation.

Key-highlights of the meeting:

- The BRICS ministers called for the need to adopt emerging new technologies, recognising it as an important tool for modernisation and transformation of industry, and promotion of economic growth.
- They also committed to play a constructive role towards the promotion of IPR, and expressed their intention to collaborate with NDB.
- The meeting concluded with the ministers committing to work together as a group, share best practices and move ahead in a positive and constructive manner to achieve the 2030 agenda for sustainable development.

Theme

India chose the theme of 'Intra BRICS Cooperation for Continuity, Consolidation and Consensus' for its chairship.

Major points made by India's minister

- India has been working towards channelizing technology and has leveraged existing platforms and digital technologies such as Aadhar and UPI payments, along with online systems like COWIN and digital vaccination certificates being widely successful
- **Special emphasis is given to:**
 - Expansion of the horizon of NDB and for utilizing its resources for strengthening social infrastructure, especially for funding service delivery in education and health sector, besides promotion of infrastructure and industrial sector.

BRICS's principles

The following principles are laid out by BRICS for the task of Strengthening and Reforming the Multilateral System:

- Global governance is more inclusive, representative and participatory to facilitate greater and more meaningful participation of developing and least developed countries.
- Strengthen the capacities of individual States and international organizations.
- Promote people-centered international cooperation at the core.
- Based on inclusive consultation and collaboration for the benefit of all.
- Make multilateral organisations more responsive, action-oriented and solution-oriented based on the norms and principles of international law and the spirit of mutual respect, justice, equality, and mutually beneficial cooperation.

New Development Bank (NDB)

The New Development Bank (NDB) is a multilateral development bank (MDB)

- **Founded in:** 2014. It became fully operational in 2016.
- **Established by:** Brazil, Russia, India, China and South Africa (BRICS).
- **Objective:** To finance infrastructure and sustainable development projects in BRICS and other emerging economies and developing countries.

INDIA COLLABORATES WITH UN LAUNCHES TECH PLATFORM FOR PEACEKEEPERS

◎ **CONTEXT:**

- India, in collaboration with the United Nation (UN), launched 'UNITE Aware', a technology platform to ensure the safety and security of peacekeepers who are operating in increasingly complex and risky environments across the world.

◎ **ABOUT:**

UNITE Aware:

- UNITE Aware is a situational awareness software programme that will utilise modern surveillance technology for real time threat assessments to peacekeepers.
- India has contributed USD 1.64 million for the project.
- India has developed the technology platform in partnership with the UN Department of Peacekeeping Operations and the Department of Operational Support.

Objectives of the mission

- To demonstrate the impact of modern surveillance technology on the detection of asymmetric threats.
- To improve camp security for UN peacekeepers, the overall security situation, and the quality of situational awareness.

UN Peacekeeping missions (for initial launch)

- The UNITE Aware platform will be initially launched in four UN Peacekeeping Missions:
 - **MINUSMA** (Mali)
 - **UNMISS** (South Sudan)
 - **UNFICYP** (Cyprus)
 - **AMISOM** (Somalia)

The launch of the UNITE AWARE platform came as India assumed the Presidency of the 15-nation UN Security Council for the month of August.

What is UN Peacekeeping?

- UN Peacekeeping is guided by three basic principles:
 - Consent of the parties
 - Impartiality
 - Non-use of force except in self-defence and defence of the mandate
- UN peacekeepers provide security and the political and peace building support to help countries make the difficult, early transition from conflict to peace.

India, a major contributing nation to UN peacekeeping activities

- In 2017, India became the first country to deploy an all-women contingent to a UN peacekeeping mission in 2017.
- At present, there are 5506 troops and police from India who have been deployed to nine different UN peacekeeping missions.
 - It is the second highest amongst troop-contributing countries.
- More than 200,000 Indians have served in 49 of the 71 UN peacekeeping missions established around the world, since 1948.

PM GATI SHAKTI MASTER PLAN

- ◎ **CONTEXT:**
- On India's 75th Independence Day, 'PM Gati Shakti Master Plan', was launched, with a Rs. 100 lakh-crore project for developing 'holistic infrastructure'.

What is the Gati Shakti Master Plan?

- PM Gati Shakti Plan is a national infrastructure master plan.
- Aim: To make a foundation for holistic infrastructure and give an integrated pathway to the economy.

Focus area of the project:

- **Employment opportunity:** To act as a source of employment opportunities for the youth in future.
- **Leveling up local manufacturers:** To help raise the global profile of local manufacturers and help them compete with their counterparts worldwide.
- **Economic zones:** To raise possibilities of new future economic zones.
- **Infrastructure development:** Infrastructure development has the ability to create a multiplier effect with every rupee invested, yielding much higher returns.

Infrastructure sector

- Infrastructure is a major sector that propels overall development of the Indian economy.
- As per Indian Infrastructure Sector in India Industry Report, India plans to spend US\$ 1.4 trillion on infrastructure between 2019 to 2023, which is predicted to boost the expansive growth of the sector.

RBI TO PUT IN PLACE A "PRISM" TO STRENGTHEN COMPLIANCE BY LENDERS

- ◎ **CONTEXT:**
- The Reserve Bank of India is putting in place a Platform for Regulated Entities for Integrated Supervision and Monitoring (PRISM) to strengthen compliance by supervised entities (SEs).

◎ **ABOUT:**

PRISM

- PRISM is a web-based end-to-end workflow automation system.
- The focus of its new approach to 'continuous supervision' is on early identification of risks and conduct of supervisory actions.

- This is aimed at helping supervised entities to strengthen their internal defences and resilience.
- The focus of its new approach is to bring focus on '**root cause analysis (RCA)**'.
- PRISM will have various functionalities with:
 - Built-in remediation workflows
 - Time tracking
 - Notifications and alerts
 - Management information system (MIS) reports and dashboards

Entities in India regulated by RBI

- RBI regulates and supervises various entities in India.
- Entities regulated by the RBI include-
 - Banks
 - All India Financial Institutions
 - Non-Banking Financial Company (NBFC)
 - All payment system providers

RBI's annual report (2020-21) on supervisory framework

- In its latest annual report (2020-21), RBI said it has been working towards strengthening the supervisory framework for both banking and non-banking sectors.
- During the year, initiatives were taken towards:
 - integration of supervisory functions meant for different supervised entities
 - specialisation and reinforcement of supervision through both vertical and horizontal risk assessments
 - setting up a dedicated College of Supervisors for capacity development
 - harnessing SupTech (supervisory technology)

A THIRD OF INDIA'S COASTLINE UNDERWENT EROSION IN 28 YEARS: MINISTRY OF EARTH SCIENCES

◎ CONTEXT:

- As per a latest report by the National Centre for Coastal Research (NCCR) under the Union Ministry of Earth Sciences, 27% of coastline expanded between 1990 and 2018.

Key-highlights of the situation

- As much as 32 per cent of India's coastline underwent sea erosion and 27 per cent of it expanded between 1990 and 2018.
- The country's coastline is 6,631.53 kilometres long:
 - **Erosion:** 2,135.65 kilometres was subject to varying degrees of erosion
 - **Expansion:** 1,760.06 km expanded during this period.
 - **Stable:** Nearly 2,700 km of the coastline is stable.

Coastline underwent erosion	Coast expanded state-wise
<ul style="list-style-type: none"> West Bengal (60 %) Puducherry (56%) Kerala (41 %) Tamil Nadu (41 %) Andhra Pradesh (28 %) Gujarat including Daman and Diu (%) Odisha (26 %) Karnataka (24 %) Maharashtra (22 %) Goa (19 %) 	<ul style="list-style-type: none"> Odisha (51%) Andhra Pradesh (48%) Karnataka (26%) West Bengal (25%) Tamil Nadu (22%) Kerala (21%) Gujarat including Daman and Diu (20%) Goa (14%) Maharashtra (10%) Puducherry (8%)

Factors and Causes of Soil Erosion

- Human Induced factors
- Faulty farming systems
- deforestation caused by overgrazing
- clearance of land for agricultural purposes
- construction, dam construction
- diversion of the natural course of rivers
- mining activities

Rainfall Intensity and Runoff

- The impact of raindrops break up the soil and water build-up creates runoff, taking sediment with it.

Why more Erosion in eastern coast rather than western coast?

- The eastern coast underwent more erosion due to frequent cyclonic activities from Bay of Bengal in the past three decades, compared to the western coast, which remained largely stable.

National Centre for Coastal Research (NCCR)

- The NCCR, an attached office of the **Ministry of Earth Sciences**, monitors shoreline changes along the Indian coast.
- It has carried out a national shoreline change assessment mapping for Indian coast using 28 years of satellite data from 1990 to 2018 along nine coastal states and two Union territories (UT) to provide information for coastal management strategy, the minister added.

The following organizations also undertake studies on shoreline changes / coastal erosion and their impact.

- The **National Centre for Sustainable Coastal Management** under the **Union Ministry of Environment, Forests and Climate Change**.
- The **Central Water Commission** under the **Union Ministry of Jal Shakti**.

FOUR MORE SITES OF INDIA ADDED TO RAMSAR LIST

◎ **CONTEXT:** ● Four more wetlands from India get recognition from the Ramsar Secretariat as Ramsar sites.

◎ **ABOUT:** **The new Ramsar sites of India**

● **Bhindawas Wildlife Sanctuary, Haryana:**

- The Bhindawas sanctuary, the largest wetland in Haryana, is a man-made freshwater wetland.
- The Sanctuary is spread over an area of 1074 acres.
- More than 30,000 varieties of migratory birds belonging to over 250 species and resident birds visit Bhindawas Bird Sanctuary Throughout the year.
- The site supports more than ten globally threatened species including the endangered Egyptian Vulture, Steppe Eagle, Pallas's Fish Eagle, and Black-bellied Tern.
- The antelope Nilgai (Blue Bull) and Jungle Cat can also be seen in this sanctuary.

● **Sultanpur National Park, Haryana:**

- It supports more than 220 species of resident, winter migratory and local migratory water birds at critical stages of their life cycles.
- More than ten of these are globally threatened, including
 - ▶ The critically endangered sociable lapwing,
 - ▶ The endangered Egyptian Vulture, Saker Falcon, Pallas's Fish Eagle and Black-bellied Tern.

● **Thol Lake Wildlife Sanctuary, Gujarat:**

- Covering a total area of 1,083,322 hectares.
- It lies on the Central Asian Flyway and more than 320 bird species can be found here.
- More than 110 waterbird species have been recorded, about 43% of India's waterbird species, with almost 30% of those species being migratory waterbirds.
- The wetland supports more than 30 threatened waterbird species, such as the critically endangered White-rumped Vulture and Sociable Lapwing, and the vulnerable Sarus Crane, Common Pochard and Lesser White-fronted Goose.

● **Wadhvana Wetland, Gujarat:**

- This is internationally important for its birdlife as it provides wintering ground to migratory waterbirds, including over 80 species that migrate on the Central Asian Flyway.
- Some threatened or near-threatened species such as
 - The endangered Pallas's fish-Eagle.
 - The vulnerable Common Pochard.
 - The near-threatened Dalmatian Pelican.
 - Grey-headed Fish-eagle.
 - Ferruginous Duck.

Ramsar Sites

- These are wetlands deemed to be of "international importance" under the Ramsar Convention.
- It is named after the city of Ramsar in Iran, where the convention was signed in 1971.
- Ramsar sites are transboundary in which case more than one Contracting Party is responsible for their conservation and management.
- The inclusion in the list is for-
 - the conservation and sustainable use of wetlands,
 - recognizing the fundamental ecological functions of wetlands and their
 - ▶ Economic value.
 - ▶ Cultural value
 - ▶ Scientific value
 - ▶ Recreational value
- It is also known as the **Convention on Wetlands**.

Aim:

- To develop and maintain an international network of wetlands which are important for the conservation of global biological diversity and for sustaining human life through the maintenance of their ecosystem components, processes and benefits.

Wetland

- A wetland is a distinct ecosystem that is flooded by water, either permanently or seasonally, where oxygen-free processes prevail.
- The primary factor that distinguishes wetlands from other landforms or water bodies is the characteristic vegetation of aquatic plants, adapted to the unique hydric soil.
- Two general categories of wetlands are recognized:
 - ▶ Coastal or tidal wetlands
 - ▶ Inland or non-tidal wetland

SYMPLOCOS MOHANANII, A NEW PLANT SPECIES DISCOVERED IN WESTERN GHATS

◎ CONTEXT:

- A new plant has been discovered in Ponmudi Hills, Kerala which is part of the Western Ghats, one of the eight hotspots of biological diversity in the world.

◎ ABOUT:

The newly discovered plant species

- The plant is named as **Symplocos Mohananii**.
- It carries white flowers that usually bloom in night. The tree is very endemic in nature.
- It looks like other plants of the genus Symplocos.
- The plant was spotted from a hill which was about 3000 feet above sea level.
- Plants of this family are commonly known as sweet leaf plants locally.

Medicinal values

- Symplocos Mohananii has some medicinal properties
 - Bark of a few species is also used to treat **skin diseases** by tribals and also for **dye-making**.

Western Ghats

- The Western Ghats, also called the Sahyadri, are a north-south chain of mountains or hills that mark the western edge of the Deccan plateau region.
- Rich in endemic flora and fauna, the Unesco heritage site Western Ghats stretches from Gujarat to Kerala, which plays an important role in the climatic condition of the country.
- They periodically discover new plants, frogs, reptiles and other species in western ghats.

CHANDRAYAAN-2 CONFIRMS WATER ON MOON SURFACE

◎ CONTEXT:

- **The Imaging Infrared Spectrometer (IIRS) instrument on Chandrayaan-2 lunar orbiter has confirmed the presence of hydroxyl ions (OH) and water molecules (H₂O) on the surface of the moon.**

◎ ABOUT:**Chandrayaan-2 mission**

- Chandrayaan-2 is an Indian lunar mission to explore the uncharted south pole of the celestial body by landing a rover.
- **Aim:** To enhance understanding of the Moon, stimulate the advancement of technology, promote global alliances and inspire a future generation of explorers and scientists.
- **Mission coverage:** This is a unique mission that aims at studying not just one area of the Moon but all the areas combining the exosphere, the surface as well as the sub-surface of the moon in a single mission.
- The GSLV Mk-III is India's most powerful launcher to date, and has been completely designed and fabricated from within the country.

Components:

- This highly complex mission brought together an Orbiter, Lander and Rover with the goal of exploring the **South Pole of the Moon**.
- **Orbiter:** The Orbiter will observe the lunar surface and relay communication between Earth and Chandrayaan 2's Lander — Vikram.
- **Vikram Lander:** The lander was designed to execute India's first soft landing on the lunar surface.
- **Pragyan Rover:** The rover was a 6-wheeled, AI-powered vehicle named Pragyan, which translates to "wisdom" in Sanskrit.

Why the South Pole was chosen?

- The Lunar South pole is especially interesting because the lunar surface area that remains in shadow is much larger than that at the North Pole.
 - There could be a possibility of presence of water in permanently shadowed areas around it.

- In addition, the South Pole region has craters that are cold traps and contain a fossil record of the early Solar System.

Key-Findings:

- The new infrared spectrometer IIRS was designed to operate in the 0.8 to 5 μm range and mapped the lunar surface from a circular orbit of 100km from the Moon's surface.
- It has quantified the amount of water molecules present on the lunar surface regions and distinguished parts of the moon which are water-rich and scant in hydration.
- **Earlier detection:** Water was originally discovered by the Chandrayaan-1 mission, in 2008, but the low resolution of its mapper could not quantify between the OH and water molecules readings.
- Two instruments-M3 instrument and MIP instrument on CHACE instrument, confirmed the presence of water.

Source of water

- **Location of water:** The data confirmed that hydration exists on sunlit portions, permanently shadowed craters, and Polar regions.
 - The silicate rocks called plagioclase absorbed more water, while older highland rocks that rise above the surface showed weak signatures of hydration.

Proposed Theories regarding presence of water on Moon

- A number of theories have been proposed for the source of hydration on the moon, including-
- Origins from within the Moon's internal mantle processes of the past.
- Water or ice-bearing comets could have crashed into the Moon millions of years ago, depositing water molecules.
- The findings of water within olivine melt inclusions or small crystallised bits of magma on the Moon also back this origin.
- The initial data analysis from Indian Institute of Remote Sensing (IIRS) clearly demonstrates the presence of widespread lunar hydration and unambiguous detection of OH and H₂O signatures between 29 degrees north and 62 degrees north latitude.

Space weathering

- **What is Space Weathering?**
- The most likely and widespread source of water is the interaction of the solar wind or charged solar particles with the surface of the Moon, in the absence of a protective atmosphere or magnetic field.
- This process is called space weathering.
- This process is similar to **weathering processes on Earth**, there are weathering effects on atmosphere-less bodies exposed to the vacuum of space.
- It can also alter reflection and spectral readings and the optical properties of surfaces, sometimes resulting in incorrectly interpreted data.



Target PT QUICK REVISION NOTES



*PRINTED
NOTES*



ORDER NOW

UPDATED

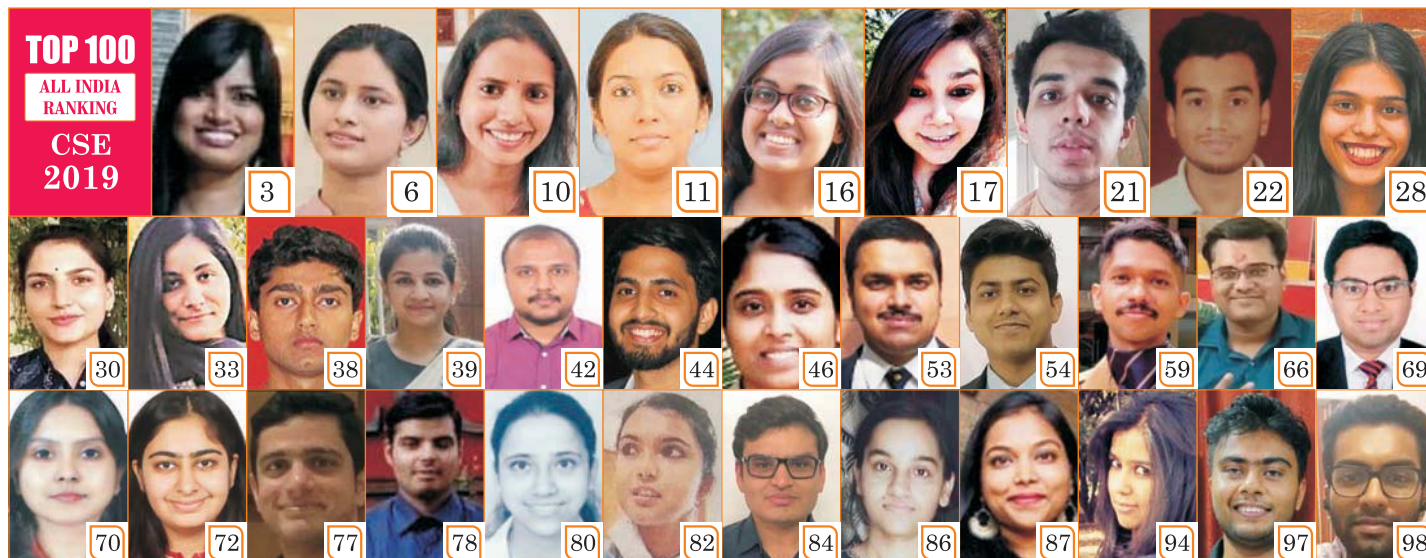
PRELIMS PRACTICE WORKBOOK



*PRINTED
NOTES*



ORDER NOW



SUCCESS IS A PRACTICE WE DO!

