# Current Affairs
## (Consolidation)

# June 2022
# (Part – I)

# Contents

# Polity and Governance

## Highlights

## World Food Safety Day

### Why in News?

Every Year, 7th June is observed as **World Food Safety Day.**

### What are the Key Highlights of World Food Safety Day?

➢ **About:**
- The **World Health Organization (WHO)** and the **Food and Agriculture Organization of the United Nations (FAO)** jointly facilitate the observance of World Food Safety Day, in collaboration with Member States and other relevant organizations.
- It was **first celebrated in 2019**, to strengthen the commitment to scale up food safety made by the Addis Ababa Conference and the Geneva Forum in 2019 under the umbrella of **"The Future of Food Safety".**

➢ **Aim:**
- To **draw attention and inspire action to help prevent, detect and manage foodborne risks**, contributing to **food security,** human health, economic prosperity, agriculture, market access, **tourism** and **sustainable development**.

➢ **2022 Theme:**
- Safer Food, Better Health

➢ **Need:**
- **Foodborne illnesses:**
  - With an **estimated 600 million cases** of foodborne illnesses annually, unsafe food is a threat to human health and economies, disproportionally affecting vulnerable and marginalized people, especially women and children, populations affected by conflict, and migrants.
- **Foodborne Disease Burden:**
  - An **estimated 420000 people around the world die every year** after eating contaminated food and children under 5 years of age carry 40% of the **foodborne disease burden**, with 125 000 deaths every year.

### What are the Related Initiatives?

➢ **Global:**
- The **Codex Alimentarius**, or "Food Code" is a collection of standards, guidelines and codes of practice adopted by the **Codex Alimentarius Commission.**
- The **Codex Alimentarius Commission is a joint intergovernmental body** of the Food and Agriculture Organization and World Health Organization.
  - Currently, it has **189 members and India is a member.**

➢ **India's:**
- **State Food Safety Index :**

Note:

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- FSSAI has developed the **State Food Safety Index (SFSI)** to measure the performance of States on five parameters of food safety.
  - The **parameters include** Human Resources and Institutional Arrangements, Compliance, Food Testing- Infrastructure and Surveillance, Training and Capacity Building and Consumer Empowerment.
- **Eat Right India Movement:**
  - It is an **initiative of the Government of India and Food Safety and Standards Authority of India (FSSAI) to transform the country's food system** in order to ensure safe, healthy and sustainable food for all Indians.
  - Eat Right India is aligned to the **National Health Policy 2017** with its focus on preventive and promotive healthcare and flagship programmes like **Ayushman Bharat**, **POSHAN Abhiyaan**, **Anemia Mukt Bharat** and **Swachh Bharat Mission**.
- **Eat Right Awards:**
  - FSSAI has instituted the **'Eat Right Awards' to recognize the contribution of food companies** and individuals to empower citizens to choose safe and healthy food options, which would help improve their health and well-being.
- **Eat Right Mela:**
  - Organised by FSSAI, it is an **outreach activity for citizens to nudge them towards eating right.** It is organised to make citizens aware of the health and nutrition benefits of different types of food.

# GeM For Cooperatives

### Why in News?

The Union Cabinet has cleared up a proposal allowing cooperatives to sell products on the **Government-e-Marketplace (GeM) platform**.

➢ The cooperatives may however be charged a transaction fee to cover the incremental costs.

➢ The validated list of cooperatives to be onboarded on the GeM - for pilot as well as subsequent scale up - will be decided by the **Ministry of Cooperation** in consultation with the GeM SPV (Special Purpose Vehicle).

### What is the Gem Portal?

➢ **GeM** is **a one-stop National Public Procurement Portal** to facilitate online procurement of common use Goods & Services required by various Central and State Government Departments/Organisations/Public Sector Undertakings (PSUs).

➢ The procurement of goods and services by Ministries and the Central Public Sector Enterprises (CPSEs) is **mandatory for goods and services available on GeM.**

➢ It also **provides the tools of e-bidding and reverse e-auction** to facilitate the government users achieve the best value for their money.

➢ At present, GeM has more than 30 lakh products, over Rs. 10 lakh crores worth of transactions have happened so far at the portal.

➢ **Launch:**
  - It was launched in 2016 to bring transparency and efficiency in the government buying process.

➢ **Nodal Ministry:**
  - Ministry of Commerce and Industry.

➢ **Recent Updates:**
  - **Country of Origin Mandatory:** GeM has made it mandatory for sellers to enter the Country of Origin while registering all new products on GeM.
    - This has been enabled on the portal so that the buyers can choose to buy only those products that meet the minimum 50% local content criteria.

### What is the Significance of GeM?

➢ **Transparent and Cost-effective Procurement:** GeM enables quick, efficient, transparent and cost-effective procurement, especially when government organizations require products and services urgently to fight against the Covid-19 pandemic.

➢ **Promotion of Atmanirbhar Bharat:** GeM has been promoting the Atmanirbhar Bharat policy, introduced in the wake of the **Covid-19 pandemic**, meant to encourage self-reliance and boost small Indian manufacturers.

➢ **Entry of Small Local Sellers:** The Marketplace has facilitated entry of small local sellers in Public Procurement, while **implementing 'Make in India'** and **MSME** Purchase Preference Policies of the Government in the true sense.

➢ **Multiple Entities at One Place:** The online marketplace can aggregate demand from multiple entities for similar products, and build on the preferences provided by State governments to small enterprises.

## *What are the Challenges associated with GeM?*

➢ **Multiple Portals:**
  ❍ There are multiple portals in Central government departments, such as the defence procurement portal, and the Indian Railways e-Procurement System, which could limit GeM's effort to achieve its mandate as the National Public Procurement Portal and provide the benefit of economies of scale and efficiency.

➢ **Lack of Compliance:**
  ❍ It also faces a bit of a challenge in getting all Central organizations to comply with Rule 149 of the **General Financial Rules (GFR) 2017,** which mandates that all common-use goods and services that are available on the GeM portal should necessarily be procured on the platform.

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**What are Co-operatives?**

➢ According to the **International Labour Organisation (ILO)**, a cooperative is an **autonomous association of persons united voluntarily to meet their common economic, social and cultural needs** and aspirations through a jointly owned and democratically controlled enterprise.

➢ There are many **types of cooperatives** such as **Consumer** Cooperative Society, **Producer** Cooperative Society, **Credit** Cooperative Society, **Housing** Cooperative Society and **Marketing** Cooperative Society.

➢ The **United Nations General Assembly** had declared the year **2012 as the International Year of Cooperatives.**

➢ India is an agricultural country and laid the foundation of **World's biggest cooperative movement in the world.**

➢ In India, a **Co-operative based economic development model is very relevant** where each member works with a spirit of responsibility.

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# Agnipath Scheme

## *Why in News?*

Recently, the government has unveiled **Agnipath scheme for recruiting soldiers** across the **Three services (Army, Navy and Airforce).**
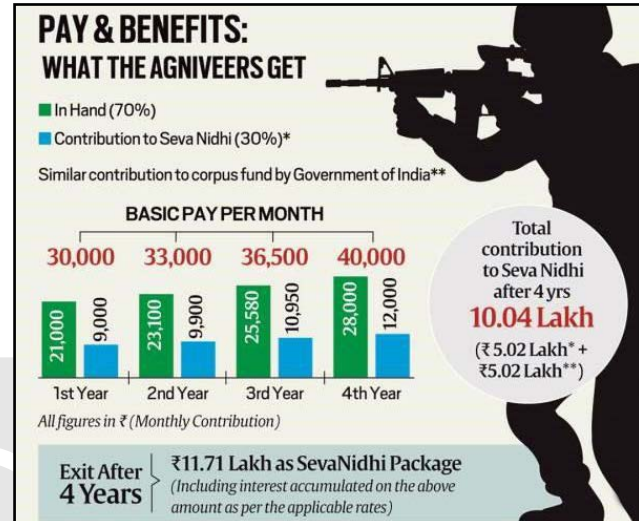


## *What is the Agnipath Scheme?*

➢ **About:**
  ❍ It allows **patriotic and motivated youth to serve in the Armed Forces for a period of four years.**
  ❍ Under this scheme, the **youth joining the army will be called Agniveer.** Youth will be able to be recruited into the army for a short duration.
  ❍ Under the new scheme, around 45,000 to 50,000 soldiers will be recruited annually, and most will leave the service in just four years.
  ❍ However, after **four years, only 25 % of the batch will be recruited back** into their respective services, for a period of 15 years.

➢ **Eligibility Criteria:**
  ❍ It is **only for personnel below officer ranks** (those who do not join the forces as commissioned officers).
    ● Commissioned officers **are the army's highest ranked officers.**
    ● Commissioned officers **hold an exclusive rank** in the Indian armed forces. They often hold a **commission under the president's sovereign power** and are officially instructed to protect the country.

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Note:

○ Aspirants between the ages of 17.5 years and 21 years will be eligible to apply.

➢ **Objectives:**

○ It aims at **providing an opportunity to the patriotic and motivated youth** with the 'Josh' and 'Jazba' to join the Armed Forces.

○ It is expected to bring down the average age profile of the Indian Armed Forces **by about 4 to 5 years.**

○ The scheme envisions that, the average age in the forces is 32 years today, which will go down to 26 in six to seven years.

➢ **Benefits for Agniveers:**

○ Upon the completion of the 4-years of service, a one-time 'Seva Nidhi' package of Rs 11.71 lakhs will be paid to the Agniveers that will include their accrued interest thereon.

○ They will also get a Rs 48 lakh life insurance cover for the four years.

○ In case of **death, the payout will be over Rs 1 crore**, including pay for the unserved tenure.

○ The government will **help rehabilitate soldiers who leave the services after four years.** They will be provided with skill certificates and bridge courses.

### *What are the Related Concerns?*

➢ **Difficult to Find Another Job:**

○ The 'Agnipath' scheme opens the way for recruitment of about 45,000 soldiers into Army, Navy and Air Force in the first year but on a short-term contract of four years. After the completion of the contract, 25% of them will be retained and the rest will leave the forces.

○ **Our four years of service will mean other jobs will be out of reach after that**, and we will be left behind our peers.

➢ **No Pension Benefit:**

○ Those hired under the 'Agnipath' scheme will be **given a one-time lumpsum** of a little more than Rs 11 lakh **when they end their four-year tenure.**

○ However, they **do not receive any pension benefits.** For most, **seeking a second job is essential to support themselves and their families.**

➢ **Training May Remain Unutilized:**

○ Forces will **lose experienced soldiers.**

○ The jawans joining the Army, Navy and Air Force will be given technical training so that they are able to support the ongoing operations. But these men and women will leave after four years, **which could create a void.**

### *What is the Significance of Such Step for the Country?*

➢ **Furure Ready Soldiers:**

○ It will create **"future-ready" soldiers.**

➢ **More Employment Opportunities:**

○ It will **increase employment opportunities** and because of the skills and experience acquired during the four-year service such soldiers will get employment in various fields.

➢ **Higher Skilled Workforce:**

○ This will also lead to **availability of a higher-skilled workforce to the economy** which will be helpful in productivity gain and overall **GDP (Gross Domestic Product) growth.**

# New Norms for Sentence Remission

### *Why in News?*

The **Ministry of Home Affairs** has issued a set of guidelines to the States and the Union Territories **on the grant of special remission to prisoners** to commemorate the **75th year of Independence**.

### *What are the Guidelines for Special Remission?*

➢ **Special Remission:**

○ As part of the **Azadi Ka Amrit Mahotsav** celebrations, **special remission would be granted to a certain category of prisoners.** These prisoners would be released in three phases.

➢ **Prisoners Eligible for Special Remission:**

○ **Women and transgender convicts of ages 50 and above** and **male convicts of 60 and above.**

● These convicts **must have completed 50% of their total sentence period** without counting the period of general remission earned.

○ Physically challenged or **disabled convicts with 70% disability** and more who have completed 50% of their total sentence period,

Note:

- ○ Terminally **ill convicted prisoners who have completed two-thirds (66%)** of their total sentence and
- ○ Poor or indigent prisoners who have completed their sentence but are still in jail due to **non-payment of fine imposed on them by waiving off the fine.**
- ○ **Persons who committed an offence at a young age (18-21)** and with no other criminal involvement or case against them and who have completed 50% of their sentence period would also be eligible.

➢ **Prisoners Excluded from the Scheme:**
- ○ Persons convicted with **death sentence or where death sentence has been commuted to life imprisonment or persons convicted for an offence for which punishment of death has been specified** as one of the punishments.
- ○ Persons convicted with s**entence of life imprisonment.**
- ○ Convicts involved in terrorist activities or **persons convicted under - Terrorist and Disruptive (Prevention) Act, 1985,** Prevention of Terrorist Act, 2002, **Unlawful Activities (Prevention) Act, 1967**, Explosives Act, 1908, **National Security Act, 1982**,**Official Secrets Act, 1923**, and Anti-Hijacking Act, 2016.
- ○ Persons **convicted for dowry death, counterfeiting currency notes, offence of rape & human trafficking,** offences under Protection of Children from Sexual Offences (POCSO) Act, 2012, Immoral Trafficking Act, 1956, Prevention of Money Laundering Act, 2002, etc., offences against the State (Chapter-VI of IPC) and any other law which the State governments or the Union Territory administrations consider appropriate to exclude would not qualify for the special remission.

## *What is Remission?*

➢ **About:**
- ○ Remission is **the complete ending of a sentence at a reduced point.** Remission is distinct from both furlough and parole in that it is a reduction in sentence as opposed to a break from prison life.
- ○ In remission, the **nature of the sentence remains untouched, while the duration is reduced i.e.,** the rest of the sentence need not be undergone.

- ○ The effect of the remission is that the prisoner is given a certain date on which he shall be released and in the eyes of the law he would be a free man.
- ○ However, in case of breach of any of the conditions of remission, it will be cancelled, and the offender has to serve the entire term for which he was originally sentenced.

➢ **Background:**
- ○ The Remission system **has been defined under the Prison Act, 1894** to be a set of rules formulated for the time being in force regulating the award of marks to, and the consequent shortening of sentence of, prisoners in Jail.
- ○ It was observed in the *Kehar Singh vs. Union of India (1989) case* that Courts **cannot deny to a prisoner the benefit to be considered for remission** of sentence.
  - By denying, the **prisoner would have to live in the prison till his/her last breath without there being a ray of hope to be free again**.
  - This would n**ot just be against the principles of reformation but will also push the convict into a dark hole** without there being a semblance of light at the end of the tunnel.
- ○ The **Supreme Court** also in the case of *State of Haryana vs. Mahender Singh (2007)* observed that, **even though no convict has a fundamental right of remission, but the State in exercise of its executive power of remission must consider each individual case** keeping in view the relevant factors.
  - Further, the Court was also of the **view that a right to be considered for remission** must be held to be legal one.
  - This is by keeping in view the constitutional safeguards for a convict covered under **Articles 20 and 21** of the Constitution.

➢ **Constitutional Provisions:**
- ○ Both the President and the Governor **have been vested with sovereign power of pardon by the Constitution.**
- ○ Under **Article 72**, the **President can grant pardons, reprieves, respites or remissions** of punishment or suspend, remit or commute the sentence of any person.
  - This can be done **for any person convicted of any offence** in all cases where:
    - The **punishment or sentence is by a court-martial**, in all cases where the punishment or

Note:

- The sentence is for an offence **under any law relating to the Union government's executive powe**r, and in all cases of death sentences.
  - Under **Article 161**, a Governor **can grant pardons, reprieves, respites or remissions of punishment**, or suspend, remit or commute the sentence.
    - This can be done for anyone convicted under any law on a matter which comes under the State's executive power.
  - The **scope of the pardoning power of the President under Article 72 is wider than the pardoning power of the Governor under Article 161.**
- **Statutory Power of Remission:**
  - The **Code of Criminal Procedure (CrPC)** provides for remission of prison sentences, which means the whole or a part of the sentence may be cancelled.
  - Under **Section 432, the 'appropriate government' may suspend or remit** a sentence, in whole or in part, with or without conditions.
  - Under **Section 433, any sentence may be commuted to a lesser one** by the appropriate government.
  - This power is available to **State governments so that they may order the release of prisoners** before they complete their prison terms.

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**Meaning of the Terms**

- **Pardon:** It removes both the sentence and the conviction and completely absolves the convict from all sentences, punishments, and disqualifications.
- **Commutation:** It denotes the substitution of one form of punishment with a lighter form of punishment. For example, a death sentence may be commuted to rigorous imprisonment.
- **Remission:** It implies reducing the period of the sentence without changing its character. For example, a sentence of rigorous imprisonment for five years may be remitted to rigorous imprisonment for one year.
- **Respite:** It denotes awarding a lesser sentence in place of one originally awarded due to some special fact, such as the physical disability of a convict or the pregnancy of a woman offender.
- **Reprieve:** It implies a stay of the execution of a sentence (especially that of death) for a temporary period. Its purpose is to enable the convict to have time to seek pardon or commutation from the President.

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# National e-Governance Service Delivery Assessment 2021

### Why in News?

**Ministry of Personnel, Public Grievances and Pensions** releases the second edition of the **National e-Governance Service Delivery Assessment 2021, NeSDA 2021.**

- **J&K tops among UTs in e-Governance services delivery,** saves around Rs **200 crore** annually that was incurred in carriage of physical files during the **Annual Durbar move** between the two capital cities of Jammu and Srinagar.

### What is NeSDA 2021?

- **About:**
  - For Digital Government excellence, **the National e-Governance Service Delivery Assessment (NeSDA) initiative** has been undertaken **by the Department of Administrative Reforms & Public Grievances (DARPG).**
  - **NeSDA was launched in August 2018**, based on the Online Service Index (OSI) of UNDESA eGovernment Survey (UN E-Government Survey 2020 by the United Nations Department of Economic and Social Affairs, since 2001).
  - **This is the second edition of NeSDA,** the **first edition** was launched in **2019**.
- **NeSDA Framework:**
  - The framework covers **six sectors**, viz. Finance, Labour & Employment, Education, Local Government & Utilities, Social Welfare (including Agriculture & Health) and Environment (including Fire) sectors.
    - The framework covers services under G2B (Government to Businesses) and G2C (Government to Citizens) segments, in these six sectors.
  - During NeSDA 2021, additional 6 mandatory services at State / UT level and 4 services at Central Ministry level would be evaluated.
  - The NeSDA framework primarily assessed all the service portals (State/UT and Central Ministry service portals) on 7 key parameters. In NeSDA 2021, the framework has been enhanced to include additional 6 parameters.

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Note:

- The portals assessed were classified into one of two categories.
- State/UT/Central Ministry Portal, the designated portal of the respective government that provides a single window access to information and service links, is the first category.
- The second category comprises of the State/UT/ Central Ministry Services Portals which focus on the digital delivery of services and provide service-related information.
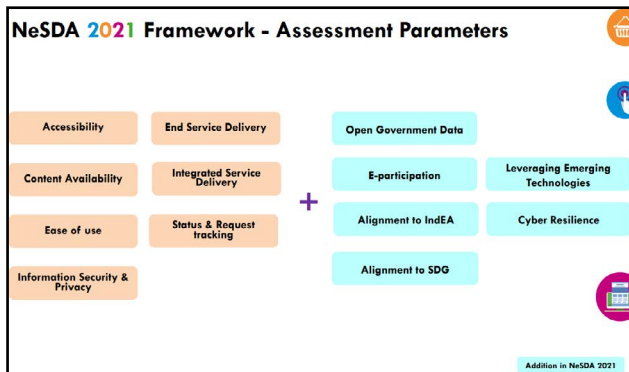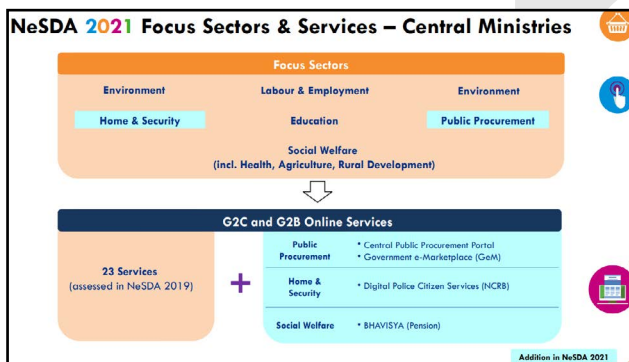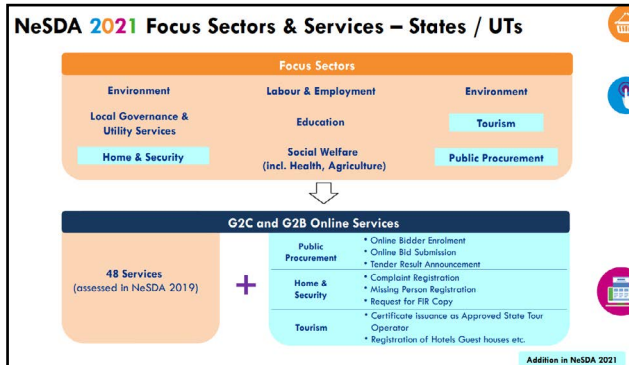






- ➢ **NeSDA 2021 Assessment:**
  - ○ Among the Central Ministry Services Portals, scores have improved for 6 portals while among States and UTs, scores have improved for 28 of the State / UT Portals and for 22 of the State / UT Services Portals.

- ○ In the category of State/UT portal, among group A states- Kerala became a front runner and the progress was made by Tamil Nadu followed by Punjab.
- ○ Among group B states- Odisha being at top followed by Uttar Pradesh and Bihar.
- ○ Among Nort-Eastern states Nagaland, Meghalaya and Assam are at top.
- ○ Among UTs, J&K topped followed by A&N, Puducherry, Delhi and Chandigarh.

**What is J&K Annual Darbar Move?**

- ➢ On 30th June 2021, the 149-year-old tradition in Jammu & Kashmir known as the Darbar Move, came to an end. The Darbar Move was a biannual practice in which the government functions for six months each in the two capitals of Srinagar and Jammu.
- ➢ The tradition of switching capitals was started in 1872 by Maharaja Ranbir Singh.
- ➢ To compensate for the governance facilitation due to the end of Darbar Move, the government of UT of J&K and Government of India focused on e-governance and separate secretariat for both Jammu and Kashmir.

# Jal Jeevan Mission

## *Why in News?*

Recently, the Centre announced that over **50% of rural households have access to tap water supply.**

## *What is Jal Jeevan Mission?*

- ➢ **About:**
  - ○ **Launched in 2019**, it envisages **supply of 55 litres of water per person per day to every rural household through Functional Household Tap Connections (FHTC) by 2024.**
  - ○ JJM looks to create a jan andolan for water, thereby making it everyone's priority.
  - ○ It **comes under Jal Shakti Ministry.**
- ➢ **Aims:**
  - ○ The mission ensures **functionality of existing water supply systems and water connections,** water quality monitoring and testing as well as sustainable agriculture.

- It also ensures conjunctive use of conserved water; drinking water source augmentation, drinking water supply system, **grey water treatment and its reuse.**

- **Features:**
  - JJM focuses on **integrated demand and supply-side management** of water at the local level.
  - Creation of **local infrastructure for source sustainability measures** as mandatory elements, like rainwater harvesting, groundwater recharge and management of household wastewater for reuse, is undertaken in convergence with other government programmes/schemes.
  - The Mission is **based on a community approach** to water and includes extensive Information, Education and Communication as a key component of the mission.

- **Implementation:**
  - Paani Samitis plan, implement, manage, operate and maintain village water supply systems.
    - These consist of 10-15 members, with at least 50% women members and other members from **Self-Help Groups**, **Accredited Social and Health Workers**, **Anganwadi** teachers, etc.
  - The committees prepare a one-time village action plan, merging all available village resources. The plan is approved in a **Gram Sabha** before implementation.

- **Funding Pattern:**
  - The fund sharing pattern between the Centre and states is 90:10 for Himalayan and North-Eastern States, 50:50 for other states, and 100% for Union Territories.

### What has been the JJM's Performance so far?

- As per the **JJM dashboard,** around 9.65 crore households (**50.38%**) have tap water connections across the nation as of 10th June, 2022.
- At the State level, **Goa, Telangana and Haryana** have achieved **100%** tap connectivity to all households in the State.
- Union territories like **Puducherry**, **the Andaman and Nicobar Islands, Dadra & Nagar Haveli and Daman & Diu** have also provided **100 %** of their households with tap water connections.

- **States with over 90 % FHTC (Functional Household toilet coverage) coverage** are (approximate figures are in brackets) – Punjab at 99.72 %, Gujarat at 95.91 % , Himachal Pradesh at 93.05% and Bihar at 92.74%.
- **States with the least FHTC coverage are** — Rajasthan at 24.87 %, Chhattisgarh at 23.10 %, Jharkhand at 20.57% and Uttar Pradesh at 13.86%.

**What is Jal Jeevan Mission (Urban)?**
- In the **Budget 2021-22**, **Jal Jeevan Mission (Urban)** has been announced under the **Housing and Urban Affairs Ministry to provide universal coverage of water supply to all households** through functional taps in all statutory towns in accordance with **Sustainable Development Goal- 6.**
- It complements the **Jal Jeevan Mission (Rural)** which envisages supply of 55 litres of water per person per day to every rural household through **Functional Household Tap Connections (FHTC) by 2024.**
- **Objectives of Jal Jeevan Mission (Urban):**
  - Securing tap and sewer connections
  - Rejuvenation of water bodies
  - creating circular water economy

## SHRESHTA Scheme

### Why in News?

Recently, the **Ministry of Social Justice and Empowerment** has launched the scheme **'SHRESHTA.'** This scheme is known as **Scheme for residential education for students in High school in Targeted Areas.**

- The scheme 'SHRESHTA' was created with the goal of providing **quality education** and **opportunity** to students of **SC Category.**

### What is the scheme 'SHRESHTA'?

- **About:**
  - Its basic motive is **to uplift the socio-economic status of the Scheduled Castes peoples** by providing **high quality education** to their children in **best private residential schools** in the country.
  - Admission will be provided in **Class 9 and Class 11** of **CBSE affiliated private schools**.
- **Objective:**
  - To make **easy delivery** of the **Governmental initiatives and schemes.**

Note:

- ❍ To create a **conducive atmosphere** for the **'S**cheduled Castes' socioeconomic advancement and overall growth.
- ❍ Collaborating with volunteer groups **to bridge the gap in service-deprived Scheduled Castes (SCs) dominating regions in the education sector.**
- ❍ To enable **bright Scheduled Caste (SC) students** with **high-quality education** so that they can pursue future opportunities.

➢ **Eligibility:**
- ❍ The students, belonging to **Scheduled Castes,** studying in class **8th and 10th** in the current academic year (2021-22) are eligible for availing the benefits of the scheme.
- ❍ Students from the SC community who come from a **marginalized income group** with an **annual income** of up to **Rs.2.5 lakh** are eligible.
- ❍ The selection will be done through a transparent mechanism which is known as **National Entrance Test for SHRESHTA (NETS).**
  - ● It will be conducted by the **National Testing Agency (NTA)** for admission in **class 9th and 11th.**

➢ **Beneficiaries:**
- ❍ Government has targeted that every year around **3000 students** belonging to **SC category** will be admitted to **Class 9 and Class 11** under this system.
- ❍ The Ministry will **cover the whole cost of their school fees and accommodation fees** till they have completed their academics in **class 12th.**

## *What are the Other Related Initiatives for SCs?*

➢ **Babu Jagjivan Ram Chhatrawas Yojana (BJRCY):**
- ❍ The **Department of Social Justice and Empowerment** is a nodal agency for implementation of this scheme.
- ❍ Central assistance is provided to the implementing agencies, namely State Governments/UT Administrations/Central and State Universities/Non-Governmental Organizations/Deemed Universities in the private sector, under the Centrally Sponsored Scheme, namely Babu Jagjivan Ram Chhatrawas Yojna (BJRCY), for the construction of new hostels/expansion of existing hostel facilities for Scheduled Castes students.

➢ **Post Matric scholarship schemes for SC:**
- ❍ It is a **Centrally Sponsored Scheme** launched in **2006.** It is implemented through State government and Union Territory administration.

- ❍ Government is committed to give a big push to its effort so that the Gross Enrolment Ratio (GER) in higher education of SCs would reach up to the national standards within the 5 year period.

➢ **Single National Scholarship Scheme:**
- ❍ The **Ministry of Social Justice and Empowerment** has been tasked to implement the Scheme by conducting a merit test.
- ❍ **Beneficiary:** Students in the **Schedule Caste, Other Backward Class (OBC), Denotified, Nomadic and semi-Nomadic Tribe (DNT)** and **Economically Backward Caste (EBC)** categories will be able to avail the national scholarship.

# Caste based Census

## *Why in News?*

Recently, **Bihar government** has announced that it will **undertake a socio-economic survey of all castes and communities (SECC).**

## *What is the Difference between Census and SECC?*

➢ **Census:**
- ❍ The origin of the Census in India **goes back to the colonial exercise of 1881.**
- ❍ Census has evolved and been used by the government, policymakers, academics, and others 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 "the census is a large, immensely powerful, but blunt instrument unsuited for specialized inquiry."

➢ **SECC:**
- ❍ The Socio-Economic and Caste Census (SECC) **was conducted in 2011** for the first time since 1931.
- ❍ SECC is meant to **canvass every Indian family, both in rural and urban India,** and ask about their:
  - ● **Economic status**, so as to allow Central and State authorities to come up with a range of indicators of deprivation, permutations, and combinations of which could be used by each authority to define a poor or deprived person.

- It is also **meant to ask every person their specific caste name** to allow the government to re-evaluate which caste groups were economically worse off and which were better off.
  - ❍ SECC has the **potential to allow for a mapping of inequalities at a broader level.**
- ➢ **Difference Between Census & SECC:**
  - ❍ The Census provides a **portrait of the Indian population,** while the SECC is a tool to identify beneficiaries of state support.
  - ❍ Since the **Census falls under the Census Act of 1948**, all data are considered confidential, whereas according to the SECC website, "all the personal information given in the SECC is open for use by Government departments to grant and/or restrict benefits to households."

## *What are the Pros and Cons of Conducting Caste based Census?*

- ➢ **Pros**
  - ❍ **Helpful in Managing Social Equity Programmes:**
    - ● **India's social equality programmes** cannot be a success without the data and a caste census would help fix that.
    - ● Due to the lack of data, there is **no proper estimate for the population of OBCs, groups within the OBCs and more**.
      - ■ The **Mandal Commission** estimated the OBC population at 5% while some others have pinned the OBC population from 36 to 65%.
    - ● The census would **'besides resolving the needless mystery** about the size of the OBC population, census enumeration would yield a **wealth of demographic information** (sex ratio, mortality rate, life expectancy), educational data (male and female literacy, ratio of school-going population, number of graduates) and policy relevant information about economic conditions (house-type, assets, occupation) of the OBCs'.
  - ❍ **Bring a Measure of Objectivity on Reservation:**
    - ● A caste-based census **could go a long way in bringing a measure of objectivity** to the debate on reservations.
    - ● According to the **Rohini Commission**, which was formed to look into equitable redistribution of the 27% quota for OBCs, noted that there are around 2,633 castes covered under the OBC reservation.

- ● However, the Centre's reservation policy from 1992 doesn't take into account that there exists within the OBCs, a separate category of Extremely Backward Castes, who are much more marginalised.
- ➢ **Cons:**
  - ❍ **Repercussions of a Caste Census:**
    - ● Caste has an **emotive element and thus there exist the political and social repercussions** of a caste census.
      - ■ There have been concerns that counting caste may help solidify or harden identities.
      - ■ Due to these repercussions, nearly a decade after the SECC 2011, a sizable amount of its data remains unreleased or released only in parts.
  - ❍ **Caste Is Context-specific:**
    - ● Caste has **never been a proxy for class or deprivation in India**; it constitutes a distinct kind of embedded discrimination that often transcends class. For example:
      - ■ People with Dalit last names are less likely to be called for job interviews even when their qualifications are better than that of an upper-caste candidate.
      - ■ They are also less likely to be accepted as tenants by landlords. Thus, difficult to measure.
      - ■ Marriage to a well- educated, well-off Dalit man still sparks violent reprisals among the families of upper-caste women every day across the country.

# Law Against Demolition Drives

## *Why in News?*

The nation has been **witnessing a frenzy of demolition drives** for the past few weeks. **Article 300A of the Indian Constitution categorically states** "No person shall be deprived of his property save by the authority of law".

- ➢ This idea of serving 'justice', quick and cold, through bulldozers emanated in Uttar Pradesh. In the wake of protests against the **Citizenship (Amendment) Act, 2019** the Uttar Pradesh government passed orders to recover damages from those who were allegedly involved in destroying public property.

Note:

❍ The State government claims that these demolitions are in response to illegal encroachments.

● However, the fact that these arbitrary demolitions are being carried out against the alleged rioters of one particular community and in the immediate aftermath of the riots shows that their purpose seems to be to impose collective punishment.

### *How are Such Demolition Drives Problematic?*

➢ **Right to Adequate Housing:**
❍ The right to housing is **a fundamental right** recognized under **Article 21 of the Indian Constitution.**

➢ **ICESCR:**
❍ Article 11.1 of the **International Covenant on Economic, Social and Cultural Rights (ICESCR)** recognises "the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions".

❍ Furthermore, under Article 11.1, **countries are under an obligation to take "appropriate steps"** to ensure the realisation of these rights such as the right to adequate housing.

● The rights recognised under ICESCR **can be restricted by States** only if the limitations are determined by law in a manner compatible with the nature of these rights and solely to promote society's general welfare.

● However, **any limitation imposed on the rights given in the Covenant** such as the right to adequate housing cannot lead to the destruction of these rights.

■ The ICESCR specifically **recognizes this in Article 5.**

➢ **International Human Rights Law Framework:**
❍ It is also a **well-documented right under the international human rights law framework**, which is binding on India.

● For instance, **Article 25 of the Universal Declaration of Human Rights (UDHR)** states that "everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care'.

❍ Besides, **international law also prohibits arbitrary interference** in an individual's right to property.

● For instance, **Article 12 of the UDHR states that "no one shall be subjected to arbitrary interference with his privacy,** family, home or correspondence, nor to attacks upon his honour and reputation".

● Article 12 also stipulates that **"everyone has the right to the protection of the law against such interference or attacks".**

➢ **ICCPR:**
❍ Article 17 of the International Covenant on Civil and Political Rights (ICCPR) also **provides that everyone has the right to own property alone as well as in association with others** and that no one shall be arbitrarily deprived of his property.

● Thus, **arbitrary interference** with an individual's property is a **gross violation of the ICCPR.**

### *What are the Related Supreme Court Judgements?*

➢ **Olga Tellis & Ors. v. Bombay Municipal Corporation & Ors (1985):**
❍ In this Judgement, the **Supreme Court ruled that eviction of pavement dwellers using unreasonable force**, without giving them a chance to explain, is unconstitutional.

● It is a violation of their **right to livelihood.**

➢ **Maneka Gandhi vs Union of India (1978):**
❍ In this Case, the **Supreme Court, while interpreting the scope of Article 21** of the Constitution, stated that the **"due process of law" is an integral part of "procedure established by law"**, explaining that such procedure must be fair, just and reasonable.

● If the procedure prescribed by law is fanciful, oppressive and arbitrary in nature then it **should not be considered procedure at all** and thus not all the requirements of Article 21 would be satisfied.

➢ **Municipal Corpn., Ludhiana v. Inderjit Singh (2008):**
❍ In this case, the apex court **categorically stated that if the requirement of giving notice is provided under a municipal legislation**, then this requirement must be necessarily complied with.

Note:

- ❍ The Apex Court of the country has made it **unambiguously clear that no authority can directly proceed with demolitions**, even of illegal constructions, without providing notice and an opportunity of being heard to the occupant.
- ➢ **Other Important Judgements:**
  - ❍ The **Supreme Court** in cases like *Bachan Singh vs State of Punjab (1980)* , *Vishaka vs State of Rajasthan (1997),* and recently in the famous *Puttaswamy vs Union of India (2017)* has laid down the principle that the **fundamental rights guaranteed under the Constitution must be read and interpreted in a manner** which would enhance their conformity with international human rights law.

### Way Forward

- ➢ As the custodian of India's constitutional order, it **is high time that the judiciary acted and imposed necessary checks on the unbridled exercise** of power by the executive.
  - ❍ **Courts should use international law to counter** the nationalist-populist discourse.
- ➢ Any justification for a demolition drive, as a penal consequence to a criminal act **is totally against established canons of criminal justice.**
  - ❍ The conduct of demolition drives, as a retaliatory measure, even with the avowed object to curb violence is a **clear act of subversion of the principle of rule of law.**

## Tree Transplantation

### Why in News?

 Recently, Comptroller and Auditor-General of India (CAG) in its audit report showed thatF only **54%** of the transplanted plants by the **Brihanmumbai Municipal Corporation (BMC), Maharashtra** have survived.

- ➢ The audit revealed that Mumbai's transplanted tree survival percentage was considerably below the **national average** of **80%.**

### What is Tree Transplantation?

- ➢ **Transplanting or replanting** is the process of **relocating a plants** from one site to another in an **agricultural field** or **garden**.

- ➢ **Tree transplants** allow plants to have longer **growing seasons**.
  - ❍ Plants can be **cultivated indoor** at first, then **outside** if the weather conditions are suitable.
- ➢ **Tree spade machine** is a specialized kind of machine that mechanizes the transplanting of large plants.
  - ❍ Larger trees may require digging, wrapping or boxing of the root ball and then transporting by truck.
- ➢ **In October 2020, the Delhi government approved a tree transplantation policy** to prevent felling of trees due to development work in the city.
  - ❍ Under the policy, agencies concerned have been asked to transplant 80% trees affected by the projects to a new location.
  - ❍ Under this policy, 10 saplings are supposed to be planted in addition to the tree being dug up with the root intact and scientifically transplanted at another location instead of being felled.

### What are the Benefits of Tree Transplantation?

- ➢ It is a good method to protect young plants from **diseases** and **pests** until they mature.
- ➢ This method can avoid the problem of **germination of seeds** by direct planting the plant seedling.
- ➢ Many parks and lakefronts can be **instantly covered with greenery** by transplanting mature trees.
  - ❍ Mature trees deliver much **greater eco-services** than saplings.
- ➢ It is a **relatively convenient but less affordable technique.**
  - ❍ Planting a purchased plant immediately in the ground or in a container to grow eliminates a cumbersome stage of our gardening operations

### What are the Concerns Associated with Transplantation of Trees?

- ➢ CAG in its report has pointed out some concerns regarding low survival rate of the transplanted trees.
  - ❍ Transplanted trees **lack proper protection and maintenance.**
  - ❍ **Proper infrastructure is not available** to facilitate the process of tree transplantation.
  - ❍ **Methodology of plantations** applied by the BMC's appointed contractors are under the question.

- ❍ According to CAG the methodology used in the transplantation is **unscientific.**
- ➤ Another problem is that **not all kinds of trees can be transplanted.** While peepal, ficus, semal and sheesham are tolerant to transplantation, trees such as dak, palash, arjun, shahtoot and jhilmil are not.
  - ❍ Any tree with a tap root system cannot be transplanted as the root goes deep into the soil, and it is not possible to isolate it without damage.
- ➤ **Soil type too, is an important consideration** before transplantation. A tree growing on the Delhi Ridge will not easily acclimatise to soil in the Yamuna floodplain, as the ecosystem is different.

# Proposal of Appellate Committees for Social Media Grievance

## *Why in News?*

Recently, a proposal for setting up **'Grievance Appellate Committees'** for hearing appeals regarding social media posts has been put forward by the government of India.

## *What are the Grievance Appellate Committees?*

- ➤ **About:**
  - ❍ One or more **'Grievance Appellate Committees'** will be constituted by the Central Government as per the draft of the proposed amendments to the **IT Rules, 2021.**
  - ❍ The appellate committees will be **dealing with appeals by users against the decision of the Grievance Officer** appointed by the social media intermediary.
  - ❍ The committee will comprise **a chairperson and other members appointed by the Central government.**
- ➤ **Working:**
  - ❍ Any person aggrieved by an order of the Grievance Officer appointed by a social media network may appeal to the Grievance Appellate Committee **within 30 days of receipt of communication from the Grievance Officer.**

- ❍ The Grievance Appellate Committee shall deal with such appeal expeditiously and shall make an endeavour to **dispose of the appeal finally within 30 calendar days from the date of receipt of the appeal.**
- ❍ Every **order** passed by the Grievance Appellate Committee shall be **complied with by the intermediary concerned.**

## *What is the Need for Grievance Appellate Committees?*

- ➤ In 2021, multiple stand-offs over content moderation and takedown happened between the government and the **social media platforms.**
  - ❍ **Twitter accounts** of news websites, actors, political workers and bloggers, posting messages in support of the farmers' agitation were **blocked following government orders**.
- ➤ As Internet access continues to rapidly expand in India, new issues related to the government policies also keep emerging. Therefore, it becomes necessary to **address the gaps** to deal with such issues.

## *What are the IT rules, 2021?*

- ➤ **About:**
  - ❍ The **Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules** were notified by the government in 2021.
- ➤ **Key Features:**
  - ❍ Social media intermediaries, with registered users in India above a notified threshold, have been classified as **Significant Social Media Intermediaries (SSMIs).**
  - ❍ SSMIs are required to **appoint compliance personnel**, **enable identification of the first originator of the information** and **deploy technology-based measures for content identification.**
  - ❍ All intermediaries are required to provide a **grievance redressal mechanism for resolving complaints from users or victims.**
  - ❍ A **framework for the regulation of content** has been prescribed by online publishers of news and current affairs content, and curated audio-visual content.
  - ❍ A **three-tier grievance redressal mechanism with varying levels of self-regulation** has been prescribed for publishers.

Note:

**SOCIAL MEDIA**
- Identify 'first originator' of content that authorities consider anti-national
- Appoint grievance officer, resolve complaints in 15 days
- File monthly compliance report on complaints received, action taken

**DIGITAL NEWS**
- Follow Press Council of India, Cable TV Networks (Regulation) Act norms.
- Self-regulatory bodies to oversee adherence to Code of Ethics
- I&B Ministry to form panel, oversight mechanism

**OTT PLATFORMS**
- Self-classify content into five age-based categories: U (universal), U/A 7+ (years), U/A 13+, U/A 16+, and A.
- Parental locks for any content classified as U/A 13+ or above.
- Age verification mechanism for content classified as 'A' (adult)

➢ **Key Issues:**
- ❍ The rules may be going **beyond the powers delegated under the IT Act, 2000** in certain cases like providing for the **regulation of SSMIs** and online publishers, and requiring **certain intermediaries to identify the first originator of the information.**
- ❍ Grounds for **restricting online content are overbroad and may affect freedom of speech.**
- ❍ There are **no procedural safeguards** for requests by law enforcement agencies for information under the possession of intermediaries.
- ❍ Requiring messaging services to enable the identification of the first originator of information on its platform may adversely affect the **privacy of individuals.**

# Gun Control Legislation

## Why in News?

The United States recently witnessed two episodes of mass shootings in a span of 11 days that killed more than 30 people including elementary school children.

➢ US recorded a total of 24,576 homicides in 2020, of which approximately 79%, or 19,384 incidents, involved the use of a firearm.

➢ Regulation of firearms in the US is convened through the shared authority between the federal, State and local governments.

➢ The US Supreme Court previously held that the second amendment of the US Constitution protects the right to "keep and bear arms" for self-defence, whilst federal courts argue about a potential infringement if federal, state and local firearm regulations circumvent this right.

## What is the Gun Control Legislation of India?

➢ **The Arms Act, 1959:**
- ❍ **About:** It aims to be as extensive as possible to cover all aspects relating to the acquisition, possession, manufacture, sale, import, export, and transport of arms and ammunition in India.
- ❍ **Requirements for Acquiring Gun License:**
  - The **minimum age requirement** for acquiring a gun license in India **is 21 years.**
  - The applicant **must not have been convicted of any offence involving violence or moral turpitude five years prior** to commencing the application, not of an 'unsound mind' and not a threat to public safety and peace.
  - **Property qualification is not a criterion** for acquiring gun license.
  - Upon receiving an application, the **licensing authority (i.e., the Home Ministry),** asks the officer in-charge of the nearest police station to submit a report about the applicant after thorough vetting within a prescribed time.
- ❍ **Other Features of the Act:**
  - It defines **'prohibited arms'** as those that **either discharge any noxious liquid or gas, or weapons** that seek pressure to be applied on a trigger for discharge.
  - It allow the use of smooth bore gun with a barrel of not less than 20 inches for crop protection or sport.
  - No entity is permitted to sell or transfer any firearm which does not bear the name of the maker, manufacturer's number or any other visible or stamped identification mark.

➢ **Amendment to the Arms Act:**
- ❍ The Arms Act amended in 2019 reduces the number of firearms that an individual can procure from 3 to 2.
- ❍ The **validity of the license has been increased from the present 3 years to 5 years.**
- ❍ It also **enlists specific provisions** on curtailing the use of licensed weapons to ensure social harmony.
- ❍ **Punishment:** The **punishment of imprisonment is increased between 7 and 14 years,** along with a fine for the offense of acquisition, possession or carrying of prohibited ammunition without a license.

Note:

- It prohibits the conversion of one category of firearms to another without a license.
- Unlawful manufacture, sale and transfer are liable **for an imprisonment term not less than seven years** which could be extended to life, with a fine.

# Pradhan Mantri Awas Yojana

### Why in News?

The Pradhan Mantri Awas Yojana-Gramin (PMAY-G) has a completion rate of 67.72%, whereas the Pradhan Mantri Awas Yojana-Urban (PMAY-U) scheme that started a year ahead is **lagging behind with a 50% completion rate.**

### What are the Reasons for Delay in Both the Schemes?

➢ **Pandemic:**
  ❍ The government officials **blame the Covid-19 Pandemic for the slowdown** in the PMAY-U.
  ❍ The completion rate for houses sanctioned **before the Covid-19 pandemic stood around 80%.**
➢ **Poor Implementation by the states:**
  ❍ Six States account for 70% of the target units — West Bengal, Madhya Pradesh, Bihar, Odisha, Uttar Pradesh and Chhattisgarh.
  ❍ Out of them **only two States — Uttar Pradesh and West Bengal — have a completion rate above the national average**.
    - Bihar has **one of the lowest completion rates.**
➢ **Lack of clear titles and Documents:**
  ❍ In urban areas, issues such as **a lack of clear titles and other land documents tend to crop up.** This further **slowed down the pace.**
  ❍ The **same is true for rural areas** as well.
➢ **Centre's withholding funds in two States:**
  ❍ In West Bengal, there was **an allegation that the current state govt was repackaging the scheme** as the Bangla Awas Yojana.
  ❍ Funds for **Chhattisgarh were withheld because the State failed to provide its share** of contribution for the scheme.
    - The Centre pays **60% and the States have to bear 40% of the cost.**

### What is PMAY-G Scheme?

➢ **Launch:** To achieve the objective of **"Housing for All" by 2022**, the erstwhile rural housing scheme Indira Awaas Yojana (IAY) was restructured to **Pradhan Mantri Awaas Yojana-Gramin (PMAY-G) w.e.f 1st April, 2016.**
➢ **Ministry Involved:** Ministry of Rural development.
➢ **Aim:** To provide a pucca house with basic amenities to all rural families, who are homeless or living in kutcha or dilapidated houses by the end of March 2022.
  ❍ To help **rural people Below the Poverty Line (BPL) in construction of dwelling units and upgradation of existing unserviceable kutcha houses** by providing assistance in the form of a full grant.
➢ **Beneficiaries:** People belonging to SCs/STs, freed bonded labourers and non-SC/ST categories, widows or next-of-kin of defence personnel killed in action, ex servicemen and retired members of the paramilitary forces, disabled persons and minorities.
➢ **Selection of Beneficiaries:** Through a three stage validation - Socio Economic Caste Census 2011, Gram Sabha, and geo-tagging.
➢ **Cost Sharing:** The cost of unit assistance is shared between Central and State Governments in the ratio 60:40 in plain areas and 90:10 for North Eastern and hilly states.
➢ **Achievements:**
  ❍ It was initiated with **a target of completing 2.7 crore houses.**
  ❍ So far, according to the database maintained by the Union Rural Development Ministry, 1.8 crore houses have been constructed.
  ❍ This is 67.72% of the target.

### What is PMAY-U Scheme?

➢ **Launch:**
  ❍ 25th June 2015, intends to provide housing for all in urban areas by year 2022.
➢ **Implemented by:**
  ❍ Ministry of Housing and Urban Affairs
➢ **Features:**
  ❍ Addresses **Urban housing shortage among the Urban Poor including the Slum Dwellers** by ensuring a pucca house to eligible urban poor.

Note:

drishti

- The Mission **covers the entire urban area consisting of Statutory Towns,** Notified Planning Areas, Development Authorities, Special Area Development Authorities, Industrial Development Authorities or any such authority under State legislation which is entrusted with the functions of urban planning & regulations.
- All houses under PMAY(U) have basic amenities like toilet, water supply, electricity and kitchen.
- The Mission promotes women empowerment by providing the ownership of houses in the name of female members or in joint name.
- Preference is also given to differently abled persons, senior citizens, SCs, STs, OBCs, Minority, single women, transgender and other weaker & vulnerable sections of the society.

➤ **Achievements:**
- It was initiated with a target of constructing 1.2 crore homes.
- According to the latest numbers from the Union Urban Development Ministry, only 60 lakh units have been completed to date.

# Information Technology Rules, 2021

## Why in News?

The Ministry of Electronics and Information Technology (MeitY) issued a **draft proposal for public comment on a set of proposed amendments** to the **Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021.**

➤ The draft document was **however withdrawn the same day.**

➤ The Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 (IT Rules, 2021) was notified in February 2021.

## What is the Law?

➤ **Mandates Social Media to Exercise Greater Diligence:**
- Broadly, the **IT Rules (2021) mandate social media platforms to exercise greater diligence** with respect to the content on their platforms.

➤ **Establish a Grievance Officer:**
- They are **required to establish a grievance redressal mechanism and** remove unlawful and unfitting content within stipulated time frames.
  - The grievance officer of the **platform's redressal mechanism is responsible for receiving and resolving complaints of the users.**
- **She/he is expected to acknowledge receipt of the complaint** within 24 hours and dispose of the same in an appropriate manner within 15 days.
  - Its **access and spread by any other means on the platform** should also be disabled.
- The **privacy policies of the social media platforms must ensure** that users are educated about not circulating copyrighted material and anything that can be construed as defamatory, racially or ethnically objectionable, paedophilic, threatening the unity, integrity, defence, security or sovereignty of India or friendly relations with foreign states, or violative of any contemporary law.

## What were the Changes Proposed in the Withdrawn Draft?

➤ **Grievance Appellate Committee:**
- It proposed an additional level of oversight, namely, the **'Grievance Appellate Committee'**, functioning over and above the intermediary's grievance redressal officer.
- Broadly, in case a **user is not satisfied with the resolution** provided by the intermediary, **she/he can appeal against the decision at the appellate rather than going directly to court.**
  - However, **this did not take away the user's right to appea**l in any other court.

➤ **All Orders of the Appellate must be Compiled:**
- The draft stipulated that all orders of this **appellate must be complied with.**
- The suggested question on **'oversight' stemmed from the fact that the appellate was to be constituted by the Central Govt** empowered to appoint the Chairperson and other members.

## What is the Issue with the IT Rules 2021?

➤ **Made Government the Arbiter to Suppress Speech:**

Note:

○ This would have **made the government the arbiter of permissible speech on the internet** and incentivised social media platforms to suppress any speech that may not be palatable to the government.

➢ **Obligation on Social Media to Resolve Complaints:**

○ The draft **put forth the obligation that all social media intermediaries resolve all complaints within 72 hours** of reporting.

○ Intermediaries are **known to invest sizable time in thoroughly scrutinising and determining the content** and user accounts they are called to censor.

● The **shortened timelines therefore invited fears of a hastier approach** to get things done.

### *Have there been any Legal Challenges?*

➢ The **imposition of sub-clauses 1 and 3 of Rule 9 of the legislative guidelines** were stayed in 2021.

➢ These sub-clauses dealt with the **'Code of Ethics' for online publishers dealing with news and current affairs** content and/or curated content.

○ The sub-clauses had **stated that the entities subscribe to a three-tier mechanism** in dealing with grievances (relevant to their platform) so as to adhere to their code.

➢ This **entails self-regulation by the publishers (level I),** by self-regulating bodies of the publishers (level II) and finally, an oversight mechanism by the Central Govt (level III).

➢ The Bombay High Court however ruled, **"People would be starved of the liberty of thought and feel suffocated** to exercise their right of **freedom of speech and expression,** if they are **made to live in present times of content regulation** on the internet with the Code of Ethics hanging over their head as the Sword of Damocles."

### *Way Forward*

➢ **Making platforms share more information could prove counterproductive** in a country where the citizens still do not have a data privacy law to guard themselves against excesses committed by any party.

○ In this context, there is a **need to expedite the passing of th**e **personal data protection bill, 2019.**

➢ After that, if regulation is still deemed to be necessary, then **it must be implemented through legislation that is debated in Parliament** instead of relying upon executive rule-making powers under **Section 69A of the IT Act.**

# Good Governance

### *Why in News?*

While launching an **Integrated Credit Portal 'Jan Samarth",** Prime Minister said that India is moving ahead with the approach of **Citizen-Centric Governance**, which is the fundamental aspect of **Good Governance**, leaving behind the government-centric approach.

### *What is Jan Samarth Portal?*

➢ The portal, **an initiative of the Ministry of Finance,** is a **one-stop gateway for over a dozen of the government's** credit-linked schemes directly connecting beneficiaries to lenders.

➢ The portal will act as **a single platform for loan application and processing** under Credit-Linked Government Schemes.

➢ The portal will **improve the lives of students, farmers, businessmen, Micro, Small and Medium Enterprises entrepreneurs** and will also **help the start-up ecosystem.**

○ The idea behind launching this portal is **to encourage inclusive growth and development of several sectors.**

### *What is Good Governance?*

➢ **About:**

○ Governance is the **process of decision-making** and the process by which decisions are implemented (or not implemented).

● Governance can be used in several contexts such as **corporate governance, international governance, national governance and local governance.**

○ Good Governance is defined as **"the manner in which power is exercised in the management of a country's economic and social resources for development".**

Note:

- ○ The concept of good governance existed even during the days of Chanakya.
  - He had mentioned it **elaborately in Arthashastra.**
- ○ **Citizens centric administration** lies on the foundation of good governance.
- ➢ **8 Principles of Good Governance:**
  - ○ **Participation:**
    - People should be able to voice their own opinions through legitimate immediate organizations or representatives.
    - This includes men and women, vulnerable sections of society, backward classes, minorities, etc.
    - Participation also implies freedom of association and expression.
  - ○ **Rule of Law:**
    - Legal framework should be enforced impartially, especially on human rights laws.
    - Without rule of law, politics will follow the principle of matsya nyaya ie law of fish which means the strong will prevail over the weak.
  - ○ **Consensus Oriented:**
    - Consensus oriented decision-making ensures that even if everyone does not achieve what they want to the fullest, a common minimum can be achieved by everyone which will not be detrimental to anyone.
    - It mediates differing interests to meet the broad consensus on the best interests of a community.
  - ○ **Equity and Inclusiveness:**
    - Good governance assures an equitable society.
    - People should have opportunities to improve or maintain their well-being.
  - ○ **Effectiveness and Efficiency:**
    - Processes and institutions should be able to produce results that meet the needs of their community.
    - Resources of the community should be used effectively for the maximum output.
  - ○ **Accountability:**
    - Good governance aims towards betterment of people, and this cannot take place without the government being accountable to the people.

- Governmental institutions, private sectors, and civil society organizations should be held accountable to the public and institutional stakeholders.
- ○ **Transparency:**
  - Information should be accessible to the public and should be understandable and monitored.
  - It also means free media and access of information to them.
- ○ **Responsiveness:**
  - Institutions and processes should serve all stakeholders in a reasonable period of time.

## *What is the Need for Good Governance?*

- ➢ Improving governance is a part of the development process.
- ➢ It is argued that **corruption can be curbed by systematic changes in governance through introducing participation**, Governance, Transparency & Accountability in the administration.
- ➢ The **right to good governance is considered as an essential part of the citizens' rights**.
- ➢ Reports have shown that substantially enhanced public sector outlays for education, health, water, sanitation, rural employment, etc. have not resulted in the desired outcomes. At the centre of an answer to this paradox is the **issue of 'transparent and accountable governance'.**
- ➢ Without **good governance, no amount of developmental schemes can bring in improvement in the quality of life of the citizens.**
- ➢ Poor governance generates and reinforces poverty and subverts efforts to reduce it. There is growing evidence that the fruits of economic reforms have not been equally distributed; **regional and socio-cultural disparities have only increased.**

## *What are the Challenges to Good Governance?*

- ➢ **Attitudinal Problems of Civil Servants**: As per the 2nd ARC report Civil Servants have become inflexible, self-perpetuating, inward-looking.
- ➢ **Lack of Accountability**: Very rarely disciplinary actions are initiated against delinquent officers. There is no performance evaluation structure.

Note:

➤ **Red Tapism:** Bureaucracies have to adhere to rules and procedures which are important for good governance, however sometimes these rules and procedures are ill-conceived and cumbersome and they do not serve the very purpose of their existence.

➤ **Low Levels of Awareness of the Rights and Duties of Citizens**: Awareness of rights and duties would ensure that officials and other citizens discharge duties effectively and honestly.

➤ **Ineffective Implementation of Laws and Rules**: We have a large number of laws to protect the rights of the citizens and vulnerable sections of society, but the weak implementation of these laws erodes the faith of the citizens in the Government machinery.

### *What are the Recommendations?*

➤ To Make the Administration more Citizen-Centric, the **2ⁿᵈ ARC (Administrative Reforms Commission)** has examined the following strategies, processes, tools, and mechanisms.

○ Re-engineering processes to make Governance 'citizen-centric'.

○ Adoption of Appropriate Modern Technology.

○ Right to Information.

○ Citizens Charters.

○ Independent Evaluation of Services.

○ Grievance Redressal Mechanisms.

○ Active Citizens Participation – Public-Private Partnerships.

### What are the Related Initiatives?

➤ **Right to Information**.

➤ **E-Governance**.

➤ **Ease of Doing Business**.

➤ **Police Reforms**.

➤ **Aspirational Districts Programme.**

➤ **Good Governance Index.**

➤ **Unified Payment Interface.**

Note:

# Economic Scenario

## Highlights

- Rubber Industry
- Single Nodal Agency (SNA) Dashboard of PFMS
- Regulations Review Authority
- Sustainable Fashion
- Minimum Support Price
- Stagflation

- Core Sector Output
- Bad Bank
- Neobanks
- Liquid Nano Urea
- India to Oppose Moratorium on E-Transmission at WTO
- Maharashtra Re-emerges as Top Sugar Producer

## Rubber Industry

### Why in News?

According to the **All India Rubber Industries Association (AIRIA)**, the USD 2-billion non-tyre rubber sector is aiming to double its exports by 2025.

➤ The global market for rubber products, which is estimated at around $212 billion is expected to grow by 2025.

➤ The government should take steps to ensure that the terms of the **Free Trade Agreements (FTAs)** benefit the **MSMEs** to increase rubber exports.

➤ As MSMEs are so important to India's economy and commerce, India's should include FTAs provisions to address the special concerns, demands and barriers that MSMEs may face while doing business in foreign markets.

### What is AIRIA (All India Rubber Industries Association)?

➤ The All-India Rubber Industries Association (AIRIA) is a not for profit making body serving the rubber industry and trade with the objectives of safeguarding and promoting interests of the industry.

### What are Key Features of Rubber?

➤ **About:**
  ○ Natural rubber is a polymer of isoprene, an organic compound.

○ Rubber is a coherent elastic solid obtained from the latex of a number of tropical trees of which **Hevea brasiliensis** is the most important.

○ Rubber trees have an economic life period of around 32 years in plantations.
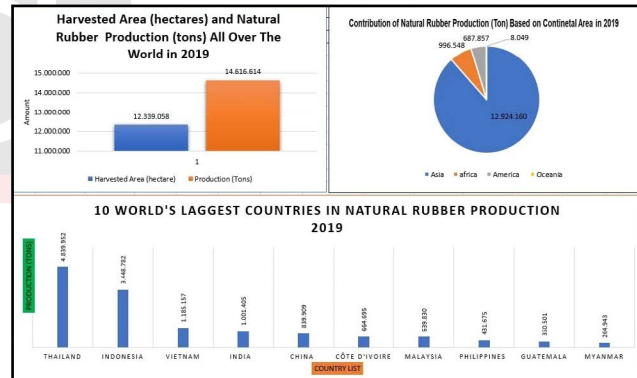


➤ **Sources:**
  ○ Natural rubber comes from various sources, the most common being the Pará rubber tree (**Hevea brasiliensis**). It grows well under cultivation and **yields latex** for several years.

  ○ The vines in the **genus Landolphia** yield the Congo rubber. These vines cannot be grown in cultivation and this led to large-scale exploitation of the wild plants in Congo.

  ○ Latex is also present in dandelion milk which can be used to produce rubber.

➤ **Cultivation of Rubber Trees:**
  ○ **Soil:**
    ● The trees demand well-drained and well-weathered soils.

Note:

- **Lateritic type, alluvial, sedimentary types, and non lateritic red soils** are best for the growth of these trees.
  ○ **Precipitation and Temperature:**
    - An evenly distributed rainfall with **at least 100 rainy days a year** and a temperature range of about **20 to 34°C** are optimum conditions for the growth of the Hevea rubber tree.
    - A **humidity of around 80%, 2000 hours of sunshine, and absence of strong winds** are also necessary for the best results.

➢ **Uses:**
  ○ Rubber is used for a variety of purposes from **erasing pencil marks to manufacturing tyres, tubes and a large number of industrial products.**

➢ **Natural rubber is preferred over synthetic rubber** due to its high tensile strength and vibration dampening properties, along with tear resistance.
  ○ This makes it important for the construction and automobile industries.
  ○ The growth of the automobile market across countries is anticipated to increase the demand for natural rubber production.
  ○ The rise in demand for latex products, such as catheters, gloves, and belts, is also a factor that is likely to aid in the growth of the rubber market.

➢ **Production and Distribution:**
  ○ According to FAOStat (Food and Agricultural Organisation Corporate Statistical Database) of 2019, Thailand is the largest Producer of Rubber in the World followed by Indonesia, Malaysia, India, China etc.

### What is the Status of Rubber Production in India?

➢ According to FAOStat 2019, India is the **fourth largest producer and consumer of Rubber in the World.**

➢ **Consumption:**
  ○ Most of the rubber consumption came from the transportation sector, followed by the footwear industry.

➢ **Exports:**
  ○ The quantity of natural rubber which was exported from India accounted for over 12 thousand metric tons during fiscal year 2020.

○ The leading countries importing natural rubber from India were **Germany, Brazil, the United States and Italy.**
○ Export products included **automotive tires and tubes, footwear, pharmaceutical goods and hoses, coats and aprons.**

➢ **Distribution:**
  ○ The first rubber plantations in India were set up in 1895 on the hill slopes of Kerala.
  ○ However, rubber cultivation on a commercial scale was introduced in 1902.
  ○ **Kerala** is the **largest producer** of natural rubber in India.
    - **Major areas:** Kottayam, Kollam, Ernakulam, Kozhikode districts produce practically all the rubber of this state.
  ○ **Tamil Nadu:**
    - Nilgiri, Madurai, Kanniyakumari, Coimbatore and Salem are the chief rubber producing districts of Tamil Nadu.
  ○ **Karnataka:**
    - Chikmagalur and Kodagu are the main producing districts.
  ○ **Tripura, Assam, Andaman and Nicobar, Goa** etc are some other rubber producing States.

# Single Nodal Agency (SNA) Dashboard of PFMS

### Why in News?

Recently, the Union Minister for Finance & Corporate Affairs launched the **Single Nodal Agency (SNA) Dashboard of PFMS (Public Financial Management System).**

➢ It was launched as a part of the **Azadi ka Amrit Mahotsav (AKAM) celebrations** by the Ministry of Finance.

➢ The Ministry of Finance is observing the **'Iconic Week' celebrations from 6th to 12th June 2022** to celebrate AKAM.

➢ Additionally, the training modules for the Department of Expenditure were launched as part of **Mission Karmayogi.**

Note:

**What is Mission Karmayogi?**

➢ It **aims to prepare Indian civil servants for the future** by making them more creative, constructive, imaginative, proactive, innovative, progressive, professional, energetic, transparent, and technology-enabled.

➢ **Comprehensive reform of the capacity building apparatus** at the individual, institutional and process levels for efficient public service delivery.

## *What is SNA Dashboard?*

➢ **About:**
  ○ It is a **major reform initiated in 2021** with regards to the **manner in which funds for Centrally Sponsored Schemes (CSS) are released**, disbursed and monitored.
  ○ This revised procedure, now referred to as the **SNA model,** requires each State to identify and designate **a SNA for every scheme.**
  ○ All funds for that State in a particular scheme are now credited in this bank account, and all expenses by all other Implementing Agencies involved are affected from this account.

➢ **Significance:**
  ○ **Ensure Allocation of Funds:**
    ● The SNA model **ensures that allocation of funds to States for the CSS are made in a timely manner** and after meeting various stipulations.
  ○ **Brought Greater Efficiency:**
    ● Effective implementation of this Model has **brought about greater efficiency in CSS fund utilization**, tracking of funds, pragmatic and just-in-time release of funds to the States; ultimately all contributing to better Cash Management of the Government.

➢ **Need:**
  ○ In order to give the stakeholders of the SNA model the necessary feedback and monitoring tools in the operation of the schemes.
  ○ The **Dashboard depicts releases made to different States by Ministries,** further releases made by State Treasuries to the SNA accounts, expenditure reported by the agencies, interest paid by banks to SNA accounts etc. in intelligible, informative and visually appealing graphics.

## *What is PFMS?*

➢ **About:**
  ○ PFMS, earlier known as **Central Plan Schemes Monitoring System (CPSMS)**, is a web-based online software application developed and implemented by the Office of Controller General of Accounts (CGA), Ministry of Finance.
  ○ PFMS was **initially started during 2009 as a Central Sector Scheme** of **Planning Commission** with the objective of tracking funds released under all Plan schemes of the Government of India, and real time reporting of expenditure at all levels of Programme implementation.
  ○ Subsequently in the year 2013, the scope was enlarged to cover direct payment to beneficiaries under both Plan and non-Plan Schemes.
    ● In 2017, the Government scrapped the distinction between **plan and non-plan expenditure.**

➢ **Objective:**
  ○ To **facilitate a sound Public Financial Management System** for the Government of India (GoI) by establishing an efficient fund flow system as well as a payment cum accounting network.

➢ **Coverage:**
  ○ At present, the ambit of PFMS coverage includes **Central Sector and Centrally Sponsored Schemes** as well as other expenditures including the **Finance Commission** Grants.
  ○ PFMS provides various stakeholders with a real time, reliable and meaningful management information system and an effective decision support system, as part of the **Digital India initiative** of GoI.
  ○ PFMS is integrated with the **core banking system** in the country

# Regulations Review Authority

## *Why in News?*

The **Regulations Review Authority** of the **Reserve Bank of India (RBI)** has recommended **withdrawal of 714 regulatory instructions which have either become obsolete or redundant.**

➢ This is part of the **RRA 2.0 recommendations on issues** such as,

○ Ease of compliance,

○ Reduction of regulatory burden

○ Rationalization of reporting mechanism,

○ Streamlining instructions and communication.

## *What are the Recommendations of the RRA?*

➤ Complete elimination of paper-based returns and **has identified 65 regulatory returns which should either be discontinued or merged with other returns** or should be converted into online returns.

➤ The Review and **revocation of time-barred and old regulations may be taken up for alignment with the recent circulars** and this exercise can be institutionalised in such a manner that **only the current and updated instructions are available in public domain.**

➤ It has proposed **a periodic review of regulatory or supervisory returns at least once in three years.**

➤ A separate web page, namely, 'Regulatory Reporting' in the RBI website so that all the information relating to regulatory, supervisory and statutory **returns would be consolidated at a single source on the RBI website.**

## *What is the Regulations Review Authority?*

➤ **Background:**

○ The RBI earlier set up the first RRA for a period of one year from 1st April, 1999.

○ This is for reviewing the regulations, circulars, reporting systems, based on the feedback from the public, banks and financial institutions.

➤ **RRA 2.O:**

○ RRA 2.0 seeks to streamline the **regulatory instructions, reducing the compliance burden of the entities under regulations.** The RRA 2.0 will achieve this by **simplifying procedures and reducing reporting requirements** wherever possible.

○ The RBI had set up RRA 2.0 in 2021 year to **reduce the compliance burden on the regulated entities** and streamline regulatory instructions.

➤ **Terms of Reference of RRA 2.0:**

○ Making **regulatory and supervisory instructions more effective** by removing redundancies and duplications.

○ To **obtain feedback from regulated entities** on simplification of procedures and enhancement of ease of compliance.

○ RRA **will reduce the compliance burden on regulated entities** by streamlining the reporting mechanism; revoking obsolete instructions if necessary.

○ To examine and suggest the changes required in the dissemination process of RBI circulars/ instructions.

○ To **engage internally as well as externally with all regulated entities** and other stakeholders to facilitate the process.

# Sustainable Fashion

## *Why in News?*

Responsible production and consumption — **the United Nations' Sustainable Development Goal 12** — has become an increasingly important conversation within the **'slow fashion' movement,** especially since the 2013 **Rana plaza Tragedy** in Bangladesh.

➤ On 24th April 2013, the collapse of the Rana Plaza building in Dhaka, Bangladesh, which housed five garment factories, **killed at least 1,132 people** and injured more than 2,500. It brought the attention of the international community and consumers towards the conditions of workers and sustainable fashion.

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**What is Slow Fashion Movement?**

➤ Slow Fashion is a**n approach to producing clothing which takes into consideration all aspects of the supply chain and in doing so, aims to respect people, the environment, and animals.**

➤ It also means spending more time on the design process, ensuring that each piece of apparel is quality made.

➤ Fast Fashion retailers have taught us that more is better, and thereby have created a huge consumption issue. The fast fashion industry is driving down quality, exploiting the environment and their workers to create cheap garments that do not last.

○ Slow fashion is the exact opposite of this. It's about creating mindful, curated collections based on quality finishes, versus pumping out large quantities of seasonal and trendy clothing.

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## *What is the significance of Sustainable Fashion?*

➤ Textiles and clothes contribute **USD 2.4 trillion to global manufacturing.**

➢ It provides **employment to 300 million people worldwide** along the value chain around the world, many of them are women.

➢ It is responsible for **2-6 % greenhouse gases emissions** of the world.

➢ It **consumes around 215 billion litres of water** per year.

➢ It **faces annual material loss of USD 100 billion** due to underutilization.

➢ Textiles account for approximately **9% microplastics losses to the ocean.**

### What are the Initiatives for Sustainable Fashion?

➢ **At Global level:**

○ **United Nations Alliance for Sustainable Fashion:**

● It is an initiative of **United Nations** agencies and allied organizations designed to contribute to the Sustainable Development Goals through coordinated action in the fashion sector.

● Specifically, the Alliance works to support coordination between UN bodies working in fashion and promoting projects and policies that ensure that the fashion value chain contributes to the achievement of the Sustainable Development Goals' targets.

○ **Traceability for Sustainable Garment and Footwear:** As part of this initiative, UNECE (United Nations Economic Commission for Europe) has launched "The Sustainability Pledge" inviting governments, garment and footwear manufacturers and industry stakeholders to pledge to apply toolkit of measures and take a positive step towards improving the environmental and ethical credentials of the sector.

○ **World Cotton Day (7ᵗʰ October)**: It creates awareness of the need of market access for cotton and cotton-related products from least developed countries, fosters sustainable trade policies and enables developing countries to benefit more from every step of the cotton value chain.

➢ **At National Level:**

○ **Project SU.RE:** SU.RE stands for 'Sustainable Resolution'. It is the first ever holistic effort towards gradually introducing a broader framework for establishing critical sustainability goals for the Indian textile industry. It was launched in 2020.

● **Objective:** The project aims to move towards sustainable fashion that contributes to a clean environment.

○ **Khadi Promotion:** Khadi and Village Industries Commission (KVIC) promotes khadi products. They have tied up with leading brands—Arvind Mills and Raymonds—and are also working with Air India to promote khadi products.

○ **Bamboo Promotion:** NITI Aayog's Forum for North East has highlighted the role of bamboo in development of the North East region. Over 60% of India's bamboo is grown in the North East.

○ **Brown Cotton:** Brown Cotton, is a local (to Karnataka) indigenous variety of desi cotton that is recognised for its natural brown colour. This effort is a larger encompassing exercise that involves the environment, the economy as well as local communities.

### What are the challenges associated with sustainable Fashion?

➢ Economic and financial barriers.

➢ A new categorization of barriers: human perceptions, resource constraints and weak legislation.

➢ Issues in finding an eco-friendly and ethical alternative to the standard manufacturing process.

➢ Lack of Technological advantage.

➢ Increase in cost of manufacturing due to increase in investment in environment saving efforts and hike in wages of labourers.

➢ Eco-Friendly brands find it challenging to deal with issues like waste accumulation, water pollution, waste management etc.

# Minimum Support Price

### Why in News?

Recently, the Centre has approved the **Minimum Support Prices** (MSP) for the **Khari season 2022-23,** stating that the rates are at least 1.5 times of the weighed average cost of production.

➢ The rates for 14 Kharif crops have been increased, the hikes ranging from 4% to 8%.

Note:

drishti

**What is Kharif Season?**

➢ Crops are **sown from June to July** and **Harvesting is done in between September-October.**

➢ **Crops are:** Rice, maize, jowar, bajra, tur, moong, urad, cotton, jute, groundnut, soyabean etc.

➢ **States are:** Assam, West Bengal, coastal regions of Odisha, Andhra Pradesh, Telangana, Tamil Nadu, Kerala and Maharashtra.

## *What is MSP?*

➢ **About:**

○ The MSP is the rate **at which the government purchases crops from farmers**, and is based on a calculation of at least one-and-a-half times the cost of production incurred by the farmers.

○ MSP is **a "minimum price" for any crop that the government considers as remunerative for farmers** and hence deserving of "support".

➢ **Crops under MSP:**

○ The Commission for Agricultural Costs & Prices (CACP) recommends MSPs for **22 mandated crops and fair and remunerative price (FRP)** for sugarcane.

● CACP is an attached office of the Ministry of Agriculture and Farmers Welfare.

○ The mandated crops include 14 crops of the kharif season, 6 **rabi crops** and 2 other commercial crops.

○ In addition, the MSPs of toria and de-husked coconut are fixed on the basis of the MSPs of rapeseed/mustard and copra, respectively.

➢ **Factors for Recommending the MSP:**

○ The CACP considers various factors while recommending the MSP for a commodity, including cost of cultivation.

○ It takes into account the supply and demand situation for the commodity, market price trends (domestic and global) and parity vis-à-vis other crops, and implications for consumers (inflation), environment (soil and water use) and terms of trade between agriculture and non-agriculture sectors.

➢ **Three Kinds of Production Cost:**

○ The CACP projects three kinds of production cost for every crop, both at state and all-India average levels.

● **'A2':**

■ Covers all paid-out costs directly incurred by the farmer in cash and kind on seeds, fertilisers, pesticides, hired labour, leased-in land, fuel, irrigation, etc.

● **'A2+FL':**

■ Includes A2 plus an imputed value of unpaid family labour.

● **'C2': It** is a more comprehensive cost that factors in rentals and interest forgone on owned land and fixed capital assets, on top of A2+FL.

○ CACP considers **both A2+FL and C2 costs** while recommending MSP.

● CACP reckons only A2+FL cost for return.

● However, C2 costs are used by CACP primarily as benchmark reference costs (opportunity costs) to see if the MSPs recommended by them at least cover these costs in some of the major producing States.

○ The Cabinet Committee on Economic Affairs (CCEA) of the Union government takes a final decision on the level of MSPs and other recommendations made by CACP.

## *What is the Nees of MSP?*

➢ The twin droughts of 2014 and 2015 forced the farmers to suffer from declining commodity prices since 2014.

➢ The twin shocks of **demonetisation and the rollout of GST,** crippled the rural economy, primarily the non-farm sector, but also agriculture.

➢ The slowdown in the economy after 2016-17 followed by the pandemic further ensured that the situation remains precarious for the majority of the farmers.

➢ Higher input prices for diesel, electricity and fertilisers have only contributed to the misery.

## *What are the Issues Associated with India's MSP Regime?*

➢ **Limited Extent:** As against the official announcement of MSP for 23 crops, only two, rice and wheat, are procured as these are distributed in NFSA (National Food Security Act). For the rest, it is mostly ad-hoc and insignificant.

> **Ineffectively Implemented:** The Shanta Kumar Committee, in its report in 2015, stated that only 6% of the MSP could be received by the farmers, which directly means that 94% of the farmers in the country are deprived from the benefit of the MSP.

> **More of a Procurement Price:** The current MSP regime has no relation to prices in the domestic market. Its sole raison d'être is to fulfil the requirements of NFSA making it effectively a procurement price rather than an MSP.

> **Makes Agriculture Wheat and Paddy Dominated:** Skewed MSP dominated system of rice and wheat leads to overproduction of these crops and discourages farmers to grow other crops and horticulture products, which has higher demand and subsequently could lead to increase in farmers income.

> **Middlemen-Dependent:** The MSP-based procurement system is also dependent on middlemen, commission agents and APMC officials, which smaller farmers find difficult to get access to.

# Stagflation

## Why in News?

Central banks across the World are trying to formulate policies to ensure that **Inflation,** in some advanced economies including the U.S., is cooled without triggering a **Recession**, since some of the experts are seeing **Stagflation** in the near future.

## What is Stagflation?

> **About:**
> ○ Stagflation means **a situation characterized by simultaneous increase in prices and stagnation of economic growth.**
>   ● The term Stagflation was coined by **Iain Macleod, a Conservative Party MP in the United Kingdom**, in November 1965.
> ○ It is described as **a situation in the economy where the growth rate slows down, the level of unemployment remains steadily high and yet the inflation or price level remains high** at the same time.
> ○ It is Dangerous for the economy.

● In a usually low growth situation, central banks and governments try to **stimulate the economy through higher public spending and low interest rates** to create demand.

● These measures **also tend to elevate prices and cause inflation.** So, these tools cannot be adopted **when inflation is already running high**, which makes it difficult to break out of the low growth-high inflation trap.
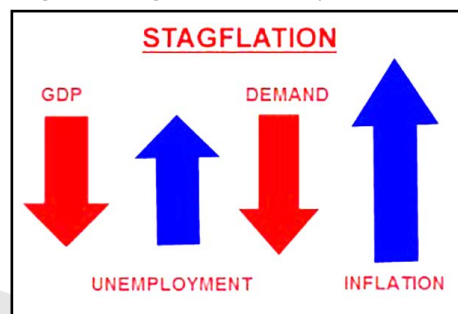


> **Case of Stagflation:**
> ○ In the early and mid-1970s when **OPEC (The Organisation of Petroleum Exporting Countries),** which works like a cartel, decided to cut supply and sent oil prices soaring across the world.
> ○ On the one hand, the rise in oil prices constrained the productive capacity of most western economies that heavily depended on oil, thus hampering economic growth. On the other hand, the oil price spike also led to inflation and commodities became more costly.
> ○ For instance, in 1974, the oil prices went up by almost 70% and it leads to a consequent rise in inflation.

## What has sparked the latest concerns about stagflation?

> **Covid-19 and Subsequent Fiscal and Monetary Measures:**
> ○ While the outbreak of the Covid-19 pandemic and the curbs imposed to contain the spread of the virus caused the first major recent economic slowdown worldwide, the subsequent fiscal and **Monetary Measures** taken to address the downturn, including substantial increases in liquidity in most of the advanced economies, fuelled a sharp upsurge in inflation.

Note:

- ➤ **Russia- Ukraine Situation and Sanctions on Moscow:**
  - ○ While the Fed and the Bank of England are among central banks that have started raising interest rates to cool soaring prices, the ongoing war in **Ukraine following Russia's invasion** of its southern neighbour and the consequent Western sanctions on Moscow have caused a fresh and as yet hard-to-quantify 'supply shock'.
- ➤ **Supply Factors:**
  - ○ With the prices of commodities ranging from oil and gas to foodgrains, edible oils and fertilizers all surging sharply in the wake of the conflict, authorities face an uphill battle to contain inflation that is now less a function of demand (and so can be controlled by regulating credit) and almost entirely caused by supply factors that are far harder to manage.

# Core Sector Output

## Why in News?

India's eight core sector industries s**howed a robust growth of 8.4% in April** compared to 4.9% in March 2022.

- ➤ The **eight core sector industries** comprise **40.27% of** the weight of items included in **the Index of Industrial Production (IIP).**
- ➤ **The eight core sector industries in decreasing order of their weightage are:** Refinery Products> Electricity> Steel> Coal> Crude Oil> Natural Gas> Cement> Fertilizers.

## What is the Index of Eight Core Industries?

- ➤ **About:**
  - ○ **Index of Eight Core Industries (ICI)** refers to the **production volume index.**
  - ○ It evaluates the **combined as well as individual performance of production** in selected eight core industries.
  - ○ **The current weightage (April 2021), of eight core industries is given below:**
    - ● Petroleum Refinery production **(28.04%),** Electricity **(19.85%),** Steel **(17.92%),** Coal production **(10.33%),** Crude Oil **(8.98%),** Natural Gas production **(6.88%),** Cement production **(5.37%),** Fertilizer production **(2.63%).**

- ○ ICI is compiled and released by the **Office of Economic Adviser (OEA), Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry.**
- ➤ **Significance:**
  - ○ ICI provides **advance indication on production performance** of industries of 'core' nature prior to the IIP release by the **National Statistical Office, NSO.**
  - ○ **General economic activities and industrial activities** are likely to get impacted by the eight core industries.

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**What is the Index of Industrial Production?**
- ➤ **About:**
  - ○ **Index of Industrial Production (IIP) is an indicator** that measures the **changes in the volume of production** of industrial products during a given period.
  - ○ It is compiled and published monthly by the **National Statistical Office (NSO),** Ministry of Statistics and Programme Implementation.
  - ○ **It is a composite indicator that measures** the growth rate of industry groups classified under:
    - ● **Broad sectors,** namely, Mining, Manufacturing, and Electricity.
    - ● **Use-based sectors,** namely Basic Goods, Capital Goods, and Intermediate Goods.
  - ○ **Base Year** for IIP is **2011-2012.**
- ➤ **Significance of IIP:**
  - ○ It is used by government agencies including the Ministry of Finance, the Reserve Bank of India, etc, for **policy-making purposes.**
  - ○ IIP remains extremely relevant for the calculation of the **quarterly and advance Gross Domestic Product, (GDP) estimates.**

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# Bad Bank

## Why in News?

Recently, the Ministry of Finance has announced that the **National Asset Reconstruction Company (NARCL)** along with the India Debt Resolution Company (IDRCL) will take over the first set of bad loans from banks and try to resolve them.

➤ The health of the balance sheets of Indian banks has improved significantly over the last few years with their Gross Non-Performing Assets (GNPA) ratio declining from a peak of 11.2% in FY18 to 6.9% in Q2FY22.

➤ NARCL has been set up by banks to aggregate and consolidate stressed assets for their subsequent resolution. PSBs will maintain 51% ownership in NARCL.

➤ IDRCL is a service company/operational entity which will manage the asset and engage market professionals and turnaround experts. Public Sector Banks (PSBs) and Public FIs will hold a maximum of 49% stake and the rest will be with private sector lenders.

➤ The government had already announced sovereign guarantees of Rs 30,600 crore for Security Receipts (SRs) to be issued by NARCL, which will be buying Rs 2 lakh crore non-performing loans from banks.

**What is a Non-Performing Asset?**

➤ NPA refers to a classification for loans or advances that are in default or are in arrears on scheduled payments of principal or interest.

➤ In most cases, debt is classified as non-performing, when the loan payments have not been made for a minimum period of 90 days.

➤ Gross non-performing assets are the sum of all the loans that have been defaulted by the individuals who have acquired loans from the financial institution.

➤ Net non-performing assets are the amount that is realised after provision amount has been deducted from the gross non-performing assets.

## *What is a Bad Bank?*

➤ A bad bank is a financial entity set up to buy **Non-Performing Assets (NPAs)**, or Bad Loans, from banks.

➤ The aim of setting up a bad bank is **to help ease the burden on banks by taking bad loans off their balance sheets** and get them to lend again to customers without constraints.

➤ After the purchase of a bad loan from a bank, the **bad bank may later try to restructure and sell the NPA to investors who might be interested in purchasing it**.

➤ A bad bank **makes a profit in its operations if it manages to sell the loan at a price higher than what it paid to acquire the loan** from a commercial bank.

➤ However, **generating profits is usually not the primary purpose of a bad bank** — the objective is **to ease the burden on banks, of holding a large pile of stressed assets**, and to get them to lend more actively.

## *What are the Pros and Cons of a Bad bank?*

➤ **Pros:**
  ○ **Single Exclusive Entity:**
    ● It **can help consolidate all bad loans of banks under a single exclusive entity**.
      ■ The idea of a bad bank has been tried out in c**ountries such as the U.S., Germany, Japan and others in the past.**
    ● The troubled asset relief program, also known as TARP, implemented by the U.S. Treasury in the aftermath of the 2008 financial crisis, was modelled around the idea of a bad bank.
  ○ **Freedom to Use Freed-up Capital:**
    ● By taking bad loans **off the books of troubled banks, a bad bank can help free capital of over Rs 5 lakh crore** that is locked in by banks as provisions against these bad loans.
    ● This will give **banks the freedom to use the freed-up capital to extend more loans** to their customers.
  ○ **Improving Capital Buffer:**
    ● It can help improve bank lending not by shoring up bank reserves but **by improving banks' capital buffers.**
    ● To the extent that a new bad bank set up by the government can improve banks' capital buffers by freeing up capital, it could **help banks feel more confident to start lending again.**

➤ **Cons:**
  ○ **Merely Shifts one Pocket of Government to another:**
    ● Bad bank backed by the government will merely shift bad assets from the hands of public sector banks, which are owned by the government, to the hands of a bad bank, which is again owned by the government.
    ● There is little reason to believe that **a mere transfer of assets from one pocket of the government to another will lead to a successful resolution of these bad debts** when the set of incentives facing these entities is essentially the same.
  ○ **Nature of Ownership:**
    ● Unlike private banks, which are owned by individuals who have strong financial incentives to manage them well, **public sector banks are**

**managed by bureaucrats who may often not have the same commitment to ensuring these lenders' profitability.**

- To that extent, bailing out banks through a bad bank **does not really address the root problem** of the bad loan crisis.

○ **Risk of Moral Hazard:**

- Commercial banks that are bailed out by a bad bank are likely to have little reason to mend their ways.
- After all, the safety net provided by a bad bank gives these banks more reason to lend recklessly and thus further exacerbate the bad loan crisis.

## *What are the Associated Challenges?*

➤ **Mobilising Capital:**
  ○ Finding buyers for bad assets in a pandemic hit economy will be a challenge, especially when governments are facing the issue of containing the **fiscal deficit.**

➤ **Not Addressing the Underlying Issue:**
  ○ Without governance reforms, the **Public sector banks** (accounted for 86%, of the total NPAs) may go on doing business the way they have been doing in the past and may end up piling-up of bad debts again.
  ○ Also, the bad bank idea is like shifting loans from one government pocket (the public sector banks) to another (the bad bank).

➤ **Provisioning Issue Tackled Through Recapitalization:**
  ○ Union Government, in the last few years, has infused nearly Rs 2.6 lakh crore in banks through **recapitalisation.**
  ○ Those who oppose the concept of bad banks hold that the government has on its part recapitalised the banks to compensate for the write-offs and hence, there is no need for a bad bank.

➤ **Market-related Issues:**
  ○ The price at which bad assets are transferred from commercial banks to the bad bank will not be market-determined and price discovery will not happen.

## *Way Forward*

➤ So long as Public Sector Banks' managements remain beholden to politicians and bureaucrats, their deficit in professionalism will remain and subsequently, prudential norms in lending will continue to suffer.

➤ Therefore, a bad bank is a good idea, but the main challenge lies with tackling the underlying structural problems in the banking system and announcing reforms accordingly.

# Neobanks

## *Why in News?*

The **RBI (**Reserve Bank of India**)** is taking a hard look at the neobank business model where **fintechs** plug into a conventional bank's network and become **customer-facing banking service providers**.

➤ The concern is that the digital model business can scale up very fast and could grow to be bigger than the underlying bank in terms of customers. Although neobank customers continue to be accountholders of the underlying bank, the only channel available to these users is the fintech-owned digital platform.

## *What are Neobanks?*

➤ A neobank is a kind of **digital bank without any branches**. Rather than being physically present at a specific location, neobanking is entirely online.

➤ Neobanks are **financial institutions** that give customers a cheaper alternative to traditional banks.

➤ They **leverage technology and artificial intelligence** to offer personalised services to customers while minimising operating costs.

➤ Neobanks entered the financial system with the tag of **'challenger banks'** because they challenged the complex infrastructure and client onboarding process of traditional banks.

➤ In India, these firms **don't have a bank licence of their own but rely on bank partners to offer licensed services.**
  ○ That's because the **RBI doesn't allow banks to be 100% digital yet.**
  ○ The RBI remains resolute in prioritising banks' physical presence, and has spoken about the need for digital banking service providers to have some physical presence as well.

➤ **RazorpayX**, **Jupiter, Niyo**, **Open**, etc are the examples of top Neobanks of India.

Note:

# NEOBANKS

## About

- A neobank is a kind of digital bank without any branches. Rather than being physically present at a specific location, neobanking is entirely online.
- They leverage technology and artificial intelligence to offer personalised services to customers while minimising operating costs.
- Neobanks entered the financial system with the tag of 'challenger banks' because they challenged the complex infrastructure and client onboarding process of traditional banks.
- Examples: RazorpayX, Jupiter, Niyo, Open,etc.

## Regulation

- In India, these firms don't have a bank licence of their own but rely on bank partners to offer licensed services.

## Need

- Smartphone penetration: As of 2020, India had a Smartphone penetration rate of 54%, which is estimated to increase to 96% by 2040. Even though 80% of the population has access to at least one bank account, financial inclusion levels are yet to improve.

## Digital Bank vs. Neobank

- Digital banks are often the online-only subsidiary of an established and regulated player in the banking sector.
- A neobank, on the other hand, exists solely online without any physical branches and independently or in partnership with traditional banks.

## Challenges
Regulatory hurdles, Impersonal, Limited services, Data privacy.

## Advantages
Low costs, Convenience, Speed, Transparency, Deep insights.

## What are the Different Operating Models of Neobanks?

- **Non-licensed** FinTech (Financial Technology) firms that collaborate with conventional banks to have a mobile/Web platform and a wrapper around their partner banks' products.
- **Traditional banks** that are undertaking their digital initiatives.
- **Licensed neobanks** (usually with digital banking licences in those countries that allow it).

## What are the Differences Between Traditional Banks and Neobanks?

- **Funding and customers' trus**t: Traditional banks have many advantages over neobanks, such as funding and most importantly customers' trust.
  - However, legacy systems are weighing them down and they find it difficult to adapt to the growing needs of a tech-savvy generation.

- **Innovation:** While neobanks don't have the funds or customer base to overthrow traditional banks, they have something special in their arsenal - innovation.
  - They can launch features and develop partnerships to serve their customers much more quickly than traditional banks.
- **Underserved by traditional banks:** Neobanks cater to retail customers, and small and medium businesses, which are generally underserved by traditional banks.
  - They leverage the mobile-first model to differentiate themselves by introducing innovative products and providing superior customer service.
- **Venture capital and private equity investors:** They have been keeping a keen eye on the market opportunities for such banks and are taking an increasing interest in them.
- **Smartphone penetration:** As of 2020, India had a Smartphone penetration rate of 54%, which is estimated to increase to 96% by 2040.

Note:

❍ Even though 80% of the population has access to at least one bank account, financial inclusion levels are yet to improve.

### What are the Challenges for Neobanks?

➢ **Fulfilling the needs of a segment of the market:** The key to their success lies in fulfilling the needs of a segment of the market, and adopting the right technology, business strategy and work culture.

➢ **Regulatory hurdles:** Since the RBI doesn't yet recognise neobanks as such, officially customers may not have any legal recourse or a defined process in case of an issue.

➢ **Impersonal:** Since neobanks don't have a physical branch, customers don't have access to in-person assistance.

➢ **Limited services:** Neobanks generally offer fewer services than traditional banks.

### What are the Advantages of Neobanks?

➢ **Low costs:** Fewer regulations and the absence of credit risk allow neobanks to keep their costs low. Products are typically inexpensive, with no monthly maintenance fees.

➢ **Convenience:** These banks offer customers the majority (if not all) of banking services through an app.

➢ **Speed:** Neobanks allow customers to set up accounts quickly and process requests speedily. Those that offer loans may skip the usual time-consuming application processes in favour of innovative strategies for evaluating credit.

➢ **Transparency:** Neobanks are transparent and strive to provide real-time notifications and explanations of any charges and penalties incurred by the customer.

➢ **Deep insights**: Most neobanks provide dashboard solutions with highly enhanced interfaces and easy to understand and valuable insights for services such as payments, payables and receivables, and bank statements.

**What is the difference between Digital Banks and Neobanks?**

➢ A **digital bank** and a neobank **aren't quite the same**, even though they appear to be based on the **mobile-first approach** and emphasis on digital operating models.

➢ While the terms are sometimes used mutually, **digital banks** are **often the online-**only subsidiary of an established and regulated player in the banking sector, a neobank, on the other hand, **exists solely online** without any physical branches and independently or in partnership with traditional banks.

# Liquid Nano Urea

### Why in News?

Recently, the Prime Minister inaugurated the **first Liquid Nano Urea (LNU) plant at Kalol, Gujarat.**

➢ It is **Indigenous Urea**, introduced firstly by the **Indian Farmers Fertiliser Cooperative Limited (IFFCO)** for farmers across the world.

**What is Indian Farmers Fertilizer Cooperative Limited?**

➢ **About:**
   ❍ It is one of India's biggest cooperative societies which is wholly owned by **Indian Cooperatives.**
   ❍ Founded in 1967 with just 57 cooperatives, today it is an amalgamation of over 36,000 Indian Cooperatives with diversified business interests ranging from General Insurance to Rural Telecom apart from its core business of manufacturing and selling fertilizers.

➢ **Objective:**
   ❍ To enable Indian farmers to prosper through timely supply of reliable, high quality agricultural inputs and services in an environmentally sustainable manner and to undertake other activities to improve their welfare.

### What is Liquid Nano Urea?

➢ **About:**
   ❍ It is urea in the form of a nanoparticle. It is a nutrient (liquid) to **provide nitrogen to plants as an alternative to the conventional urea.**
      ● Urea is a **chemical nitrogen fertiliser, white in colour, which artificially provides nitrogen**, a major nutrient required by plants.
   ❍ It is developed to replace conventional urea and it can curtail the requirement of the same by at least 50%.

Note:

- It contains 40,000 mg/L of nitrogen in a 500 ml bottle which is equivalent to the impact of nitrogen nutrient provided by one bag of conventional urea.

➢ **Developed At:**
  ○ It has been indigenously developed at Nano **Biotechnology Research Centre, Kalol, Gujrat** in line with **Atmanirbhar Bharat** and Atmanirbhar Krishi.
    - India is dependent on imports to meet its **urea requirements.**

➢ **Objective:**
  ○ It is aimed at reducing the unbalanced and indiscriminate use of conventional urea, increase crop productivity, and reduce soil, water, and air pollution.

➢ **Significance:**
  ○ **Improves Plant Nutrition:**
    - It has been **found effective and efficient for plant nutrition** which increases production with improved nutritional quality.
    - It will boost a balanced nutrition program by reducing the excess use of Urea application in the soil and will make the crops stronger, healthier and protect them from the lodging effect.
      ▪ Lodging is the bending over of the stems near ground level of grain crops, which makes them very difficult to harvest, and can dramatically reduce yield.
  ○ **Improves Environment:**
    - It will also have a huge positive impact on the quality of underground water, a very significant reduction in global warming with an impact on **climate change and sustainable development.**
  ○ **Increase Farmers' Income:**
    - It is easy on the pocket of farmers and will be effective in increasing farmers' income. It will also significantly bring down the cost of logistics and warehousing.

## How is the LNU better than the Conventional Urea?

➢ **Higher Efficiency:**
  ○ While conventional urea has an efficiency of about 25 %, the efficiency of liquid nano urea can be as high as 85-90 %.

○ Conventional urea **fails to have the desired impact on crops** as it is often applied incorrectly, and the nitrogen in it is vaporised or lost as gas. A lot of nitrogen is also washed away during irrigation.

➢ **Targeted Supply of Nutrients to Crops:**
  ○ Liquid nano urea is sprayed directly on the leaves and gets absorbed by the plant.
  ○ Fertilisers in nano form provide a targeted supply of nutrients to crops, as they are absorbed by the stomata, pores found on the epidermis of leaves.

➢ **Economical:**
  ○ A bottle of the nano urea can effectively replace at least one bag of urea.
    - The liquid nano urea comes in a half-litre bottle priced at Rs 240, and carries no burden of subsidy currently.
    - By contrast, a farmer pays around Rs 300 for a 50-kg bag of heavily subsidized urea.

# India to Oppose Moratorium on E-Transmission at WTO

### *Why in News?*

India will **oppose the continuation of a moratorium on Customs Duties on electronic transmission (E-Transmission) at the World Trade Organization's (WTO)** 12th Ministerial Conference (MC12) starting in June 2022 as it favors developed nations only.

➢ The moratorium was extended at the 11th MC in Argentina in 2017 for two years. In the General Council meeting in December 2019, members agreed to maintain the current practice till the 12th MC.

### *What is the E-transmission Moratorium?*

➢ The WTO members **had agreed not to impose customs duties on electronic transmissions since 1998** and the moratorium has been periodically extended at successive Ministerial Conferences (MC), which is the highest decision making body of the 164-member organisation (WTO).
  ○ The **moratorium is on digitisable products like** photographic films, cinematographic films, printed matter, music, media, software, and video games.

Note:

➢ In 1998, ministers at the Second Ministerial Conference adopted the **Declaration on Global Electronic Commerce**, calling for the **establishment of a work programme on e-commerce**, which was adopted later that year.

   ❍ Since **most countries didn't have concrete policies on e-commerce**, which was an emerging area of trade in even developed countries in 1998, they had decided to establish a work programme on it to hold intensive talks and impose a moratorium on customs duties on electronics transmission.

➢ In 1998, the General Council of the WTO established the work programme on e-commerce to **comprehensively examine all trade-related issues pertaining to global e-commerce** by considering the economic, financial and development needs of emerging economies.

   ❍ The WTO Work Programme on electronic commerce defines **electronic commerce" as the "production, distribution, marketing, sale or delivery of goods and services by electronic means."**

### *What does India Seek at the Meeting?*

➢ At the 12th MC in June 2022, many WTO members are seeking temporary extension of the moratorium till 13th MC but **India does not want this time to continue this further.**

➢ India and South Africa on several occasions have asked the organization to revisit the issue and have **highlighted the adverse impact of the moratorium on developing countries.**

➢ India wants the **WTO to intensify the work programme on the e-commerce sector.**

➢ India has also stated that the Council for Trade in Goods, Council for Trade in Services, Council for **TRIPS (Trade Related Aspects of Intellectual Property Rights)** and the Committee for Trade and Development **should take up discussions on e-commerce as per their respective mandates** originally set.

➢ India believed that formal negotiations in the WTO on rules and disciplines in e-commerce would be premature given the highly asymmetrical nature of the existing global e-commerce space and lack of understanding on the implications of the multi-faceted dimensions of issues related to the sector.

### *What are the Issues with the Moratorium?*

➢ India is **witnessing an exponential rise in imports of electronic transmissions**, mainly of items like movies, music, video games and printed matter, some of **which could fall within the scope of the moratorium.**

➢ Allowing the moratorium to lapse is important **for developing nations to preserve policy space for their digital advancement**, to regulate imports and generate revenue through customs duties.

➢ The potential tariff revenue loss to developing countries is estimated at USD 10 billion annually.

➢ While the profits and revenues of digital players are rising steadily, the ability of governments to check these imports and generate additional **tariff revenues is being 'severely' limited** because of the moratorium on e-commerce.

➢ It will have impact on industrialization, on the use of digital technologies like 3D printing in manufacturing and losses of other duties and charges.

# Maharashtra Re-emerges as Top Sugar Producer

### *Why in News?*

Maharashtra has once again the top sugar producer state in India after five years. It has overtaken Uttar Pradesh in sugar production.

➢ The overall production of sugar by Maharashtra accounts for **138 lakh tonnes** for the year **2021-22.**

➢ The total sugar produced by the **Uttar Pradesh** in the year **2021-22** accounts for **105 lakh tonnes.**

### *What are the Reasons for the Huge Production of Sugar in Maharashtra?*

➢ **Abundant Supply of Water:**

   ❍ **Sugarcane** is a **water intensive crop** which needs a huge water supply which farmers from Maharashtra were getting properly through **rainfall, water reservoirs, network of canals** and from **groundwater.**

   ❍ Maharashtra has been receiving more than sufficient **rainwater** since **2019** during the **south-west monsoon season.**

Note:

○ **Groundwater aquifers** and other reservoirs were filled by water due to sufficient rainfall. These sources of water play a key role in **agricultural production.**

➤ **Underreporting of Cane Production:**

○ Data regarding actual production of the sugarcane in the state of Maharashtra was not quite accurate.

○ Keeping this in mind the concerned administration tried to make corrections in the recorded data of the sugarcane production.

- This ultimately resulted in increased acreage under the sugarcane production from **11.42 lakh hectare to 12.4 lakh hectares**.

- Thus, Maharashtra harnessed the benefits from increased acreage under sugarcane in 2021-22.

## *Why did Sugar Production in Uttar Pradesh Decline?*

➤ Uttar Pradesh has become the **largest ethanol producer** because a large amount of sugarcane production in **Uttar Pradesh** diverted toward the production of **ethanol.**

○ It has been estimated that **12.60 lakh tonnes equivalent of sugar** from cane have been diverted for making **ethanol** in the year **2021-22** compared to **7.19 lakh tonnes** in **2020-21** and **4.81 lakh tonnes** in **2019-20** and **0.31 lakh tonnes** in **2018-19.**

- **Uttar Pradesh** also has achieved the **highest blending of ethanol in petrol ratio** among all states.

➤ Excess rain with water logging problems are associated with the state of Uttar Pradesh which incurred **heavy loss of sugarcane crops.**

➤ Majority of the land in sugarcane area in Uttar Pradesh(87%) is planted under a **single variety of sugarcane (Co-0238).** This variety is not a **high yield variety** of the sugarcane.

➤ Adverse impact of **red rot fungal disease on sugarcane crop** is a severe cause for the decline of sugarcane production in Uttar Pradesh.

○ **Co-0238** variety of the sugarcane is highly susceptible to the **red rot fungal diseases.**

○ It should be replaced by the new varieties, such as **Co-0118** and **Co-15023** because both of them are resistant to **red rot fungal disease.**

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**Sugarcane**

➤ **Temperature:** Between 21-27°C with hot and humid climate.

➤ **Rainfall:** Around 100-150 cm.

➤ **Soil Type:** Deep rich loamy soil.

➤ **Top Sugarcane Producing States:** Uttar Pradesh > Maharashtra > Karnataka > Tamil Nadu > Bihar.

➤ India is the **second largest producer of sugarcane** after **Brazil.**

➤ It can be grown on all varieties of soils ranging from **sandy loam** to **clay loam** given these soils should be well drained.

➤ It needs manual labour from sowing to harvesting.

➤ It is the main source of **sugar, gur (jaggery), khandsari** and **molasses.**

➤ **Scheme for Extending Financial Assistance to Sugar Undertakings (SEFASU)** and **National Policy on Biofuels** are two of the government initiatives to support sugarcane production and sugar industry.

**Ethanol Blending**

➤ **Ethanol:** It is one of the principal biofuels, which is naturally produced by the fermentation of sugars by yeasts or via petrochemical processes such as ethylene hydration.

➤ **Ethanol Blending Programme (EBP):** It is aimed at reducing the country's dependence on crude oil imports, cutting carbon emissions and boosting farmers' incomes.

➤ **Blending Target:** The Government of India has advanced the target for 20% ethanol blending in petrol (also called E20) to 2025 from 2030.

■■■

Note:

# International Relations

## Highlights

- World Summit of Information Society 2022
- India & Gulf Countries
- Organisation of Islamic Cooperation
- How does OIC Function?
- India-Israel Relations
- India-Bangladesh Railway Links Restored
- The International Day of UN Peacekeepers
- UN Report on the Taliban Regime

- China's Expansion in the Pacific Island Countries
- Trincomalee Port of Sri Lanka
- Industry Transition Dialogue between India and Sweden
- India Vietnam Partnership
- Shanghai Cooperation Organization (SCO)
- Israel Signs Free TradeDeal with UAE
- Australia India Water Security Initiative (AIWASI)
- Aegean Sea

# World Summit of Information Society 2022

## Why in News?

Recently, the Minister of Communications attended the opening ceremony of the **World Summit of Information Society (WSIS) 2022** in Geneva, Switzerland, where **India showcased its telecom prowess during multilateral & bilateral engagements.**

➢ The participation comes with India contesting the re-election to the **ITU (International Telecommunication Union) Council**, for the term 2023-2026. India has been a member of ITU, since 1869 and has been continuously participating, actively in the works, and activities of the Union.

## What is WSIS?

➢ The World Summit on the Information Society Forum 2022 represents the world's **largest annual gathering of the 'ICT for development' community**.

➢ The Forum provides **structured opportunities to network, learn and participate in multi-stakeholder discussions and consultations on WSIS implementation.**

➢ The Agenda and Programme of the Forum will be built on the basis of the submissions received during the Open Consultation Process.

➢ Furthermore, the 2022 WSIS Forum will p**rovide an opportunity to serve as a platform to track the** **achievements of WSIS Action Lines** in collaboration with the UN Agencies involved and provide information and analyses of the implementation of WSIS Action Lines since 2005.

## What are the Highlights of the Minister's Address?

➢ India has developed the Low mobility Large Coverage Standard, earlier called **5Gi** using a new waveform that enables 5G towers to cover wider areas in rural and remote areas.

  ○ These standards were among the first 5G standards, which have been approved by the **ITU** and have also become part of Globally harmonized 3GPP (3rd Generation Partnership Project) Release 17 standards. These will be immensely helpful for countries with similar geographical spread.

➢ Over six hundred villages are being connected on **Optical Fibre cable**, with nearly 175,000 already connected.

➢ Villages left out of 4G connectivity are being covered through **Universal Service Obligation Fund (USOF)**.

➢ India focuses on the **use of technologies that can accelerate development and bridge this divide**, like using E band wireless carriers, **LEO (Low Earth Orbit)** and **MEO (Middle earth Orbit)** satellite connectivity among others.

➢ India has issued the first service license for LEO or MEO connectivity and hopes to harness the technology to enable digital inclusion in remote areas.

Note:

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➢ Developing 5G test bed, indigenous 4G and 5G stack, development of Indian 5G standards and setting up of 6G innovation forum are the initiatives to reduce cost, facilitate faster 5G spread in rural areas and eliminate dependency on specific vendors.

**What is Universal Service Obligation Fund (USOF)?**

➢ **USOF** ensures that there is universal **non-discriminatory access to quality ICT services** at economically efficient prices to people in rural and remote areas.

  ○ Currently, it is charged at the rate of 5%, while the TSPs demand it to be reduced to 3%.

➢ It was created under the Department of Telecommunications in **2002.**

➢ It is a **non-lapsable fund,** i.e., the unspent amount under a targeted financial year does not lapse and is accrued for next years' spending.

➢ All credits to this fund require **parliamentary approval** and it has a **statutory support** under **Indian Telegraph (Amendment) Act, 2003.**

# India & Gulf Countries

### Why in News?

Recently, Indian Vice President visited **Qatar**, which is one of the **Gulf Cooperation Council (GCC) Countries (Bahrain, Kuwait, Qatar, Oman, Saudi Arabia, and the UAE)**, where he highlighted the **strength of India-Qatar ties and called for building an enabling environment and forging more collaborations** for mutual benefit.



### What are the Key Highlights of the Vice President's Visit to Qatar?

➢ **India-Qatar Start Up bridge:**

  ○ The Vice President launched the "India-Qatar Start Up bridge" that **aims to link the start-up ecosystems of the two countries.**

    ● India has emerged as the **3rd largest ecosystem for startups globally**, with over 70,000 registered Startups.

    ● India is home to 100 unicorns with **a total valuation of over USD 300 billion.**

➢ **Environment and Climate Change:**

  ○ India has been making sustained efforts for the protection of environment and combating climate change.

  ○ He recalled **India's leadership in establishing the International Solar Alliance (ISA)** and increasing the thrust on renewable energy.

  ○ He invited Qatar, as I**ndia's trusted partner in its energy security**, to be a partner in this journey for sustainability and join the ISA.

➢ **Joint Business Council Between Business Chambers:**

  ○ He expressed happiness that a Joint Business Council between Business Chambers of India and Qatar has been established and that a Joint Task Force on Investments would take its work forward.

  ○ He also complimented Invest **India and Qatar Investment Promotion Agency for entering into a partnership of guiding and assisting businesses** on both sides to tap new and emerging opportunities.

➢ **Collaborations at Multilateral Forums:**

  ○ He called for more collaboration between India and Qatar at multilateral forums like the **Inter Parliamentary Union (IPU)**, Asian Parliamentary Assembly, and others.
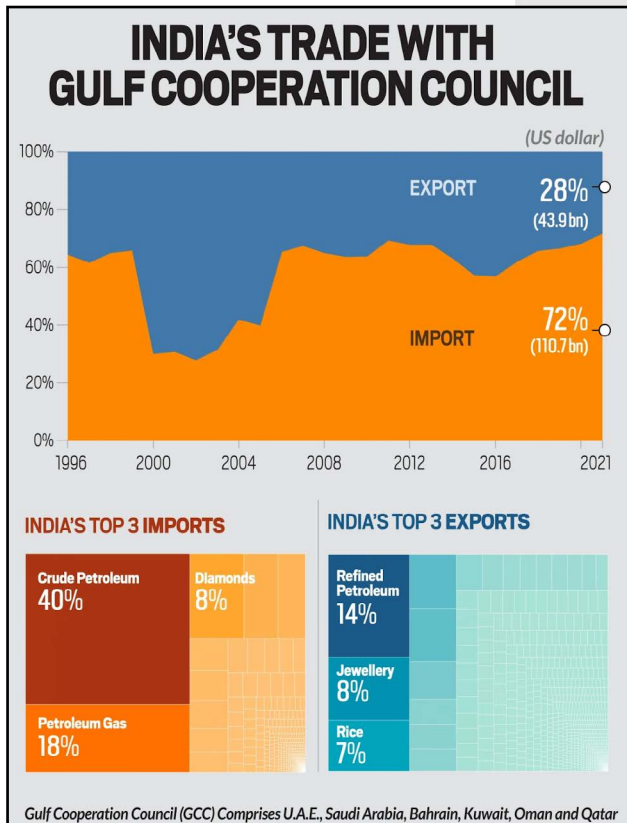
### Why is the Gulf Region Crucial for India?

➢ India has enjoyed **centuries of good relations with countries like Iran, while smaller gas-rich nation Qatar is one of India's closest allies** in the region.

➢ India shares good relations with most of the countries in the Gulf.

➢ The **two most important reasons for the relationship are oil and gas, and trade.**

Note:

- Two additional reasons are the **huge number of Indians who work in the Gulf countries, and the remittanc**e they send back home.

## *How much trade does India do with countries in this region?*

- **UAE:**
  - The UAE was **India's third largest trading partner in 2021-2022**, and second largest for both exports (USD 28 billion) and imports (USD 45 billion) when these are counted individually.
  - In terms of total trade volume, the UAE (USD 72.9 billion) was **behind the United States (USD 1.19 trillion) and China (USD 1.15 trillion).**
  - The UAE accounted for **6.6% of India's total exports and 7.3% of imports in the last financial year**, up 68.4% since the previous year when international trade was impacted by the pandemic.



**INDIA'S TRADE WITH GULF COOPERATION COUNCIL**

(US dollar)

EXPORT 28% (43.9 bn)

IMPORT 72% (110.7 bn)

**INDIA'S TOP 3 IMPORTS**
- Crude Petroleum 40%
- Diamonds 8%
- Petroleum Gas 18%

**INDIA'S TOP 3 EXPORTS**
- Refined Petroleum 14%
- Jewellery 8%
- Rice 7%

Gulf Cooperation Council (GCC) Comprises U.A.E., Saudi Arabia, Bahrain, Kuwait, Oman and Qatar

- **Saudi Arabia:**
  - At a total volume of USD 42.9 billion in 2021-22, **Saudi Arabia was India's fourth largest trading partner.**

- While exports were low at USD 8.76 billion (2.07% of India's total exports), imports from **Saudi Arabia were the fourth largest at USD 34.1 billion (7%)**, up 50% from the previous year. Most of it was crude oil.

- **Iraq:**
  - It was **India's fifth largest trading partner** in 2021-22 at USD 34.3 billion.

- **Qatar:**
  - The total trade was USD 15 billion, accounting for just 1.4% of India's total trade, but the country is India's most important supplier of natural gas.
  - Qatar accounts for **41% of India's total natural gas imports.**
    - The UAE accounts for another 11%.

- **Oman:**
  - For Oman, India was the 3rd largest (after UAE and China) source for its imports and 3rd largest market (after UAE and Saudi Arabia) for its non-oil exports in 2019.
  - Major Indian financial institutions have a presence in Oman. Indian companies have invested in Oman in sectors like iron and steel, cement, fertilisers, textile etc.

## *How much oil does India import?*

- The 239 million tonnes of oil petroleum imports were worth USD 77 billion and accounted for **nearly one-fifth of the country's total imports in 2021.**

- The share of Persian Gulf countries in **India's crude imports has remained at around 60%** over the last 15 years.

- In 2021-2022, the **largest exporter of oil to India was Iraq,** whose share has gone up from 9% in 2009-2010 to 22%.

- Saudi Arabia has accounted for 17-18% of India's oil imports for over a decade. Kuwait and UAE remain major oil exporters to India. Iran used to be the second largest oil exporter to India in 2009-2010, its share went down to less than 1% in 2020-21, due to US sanctions.

## *What is the Scenario of Indians in the Gulf and the Remittances?*

- More than 13.46 million Indian citizens work abroad. If **Persons of Indian Origin** (those who have taken up citizenship of other countries, and their descendants) are added, this number goes up to over 32 million.

Note:

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➢ Counting only the 13.4 million **non-resident Indians (NRIs)**, the Gulf has the largest numbers.

  ○ The UAE (3.42 million), Saudi Arabia (2.6 million) and Kuwait (1.03 million) together account for over half of all NRIs.

➢ In terms of remittances from abroad, **India was the largest recipient in 2020 at USD 83.15 billion**, according to World Bank data.

  ○ This was nearly **twice the remittances to the next highest recipie**nt, Mexico, at USD 42.9 billion.

➢ The largest contributor is the **huge Indian diaspora in the Gulf.**

  ○ The UAE accounted for 26.9%, Saudi Arabia for 11.6%, Qatar for 6.4%, Kuwait for 5.5% and Oman for 3%. Beyond the GCC, remittances from the US accounted for 22.9%, second only to the UAE.

### *What are Recent Developments?*

➢ Recently, India and Oman signed a **Programme of Cooperation (POC)** in the fields of Science and Technology for the period 2022 – 2025.

  ○ The POC for Cooperation in the fields of Science and Technology was signed in pursuance of the Agreement for Cooperation in Science and Technology(S&T) concluded on 5th October, 1996 between Oman and India.

➢ In September 2021, India and the UAE **formally launched negotiations on the India-UAE Comprehensive Economic Partnership Agreement (CEPA).**

➢ In 2021, the Indian External Affairs Minister met the Foreign Minister of the Kingdom of Saudi Arabia, where both countries discussed **bilateral cooperation in multilateral forums such** as the **United Nations, G-20 and Gulf Cooperation Council** (GCC).

➢ In 2021, India and Bahrain agreed to strengthen their **historic ties, including in areas of defence and maritime security.**

➢ In 2020, the legal and legislative committee of Kuwait's National Assembly approved the **draft expat (expatriate) quota bill.**

  ○ According to the bill, **Indians should not exceed 15% of the population and if it is enacted into law**, over 8 lakh Indians could be forced out of Kuwait.

# Organisation of Islamic Cooperation

### *Why in News?*

Recently, the **Organisation of Islamic Cooperation (OIC)** condemned and denounced the comments on Prophet Muhammed made by two Indians.

➢ Ministry of External Affairs rejected the OIC comments, adding that the views expressed by the individuals did not reflect the views of the Indian government.

➢ Earlier, India has **lashed out at the OIC for being "communal minded"** amid the **Karnataka hijab row.**

### *What is the Organisation of Islamic Cooperation?*

➢ **About:**

  ○ The OIC claims to be the **"collective voice of the Muslim world".**

  ○ It was established at a 1969 summit in Rabat (Morocco) after what it describes as the 'criminal arson' of **Al-Aqsa Mosque in Jerusalem**.

➢ **Members:**

  ○ It has 57 member Countries.

    • India is not a Member of OIC.

➢ **Objectives:**

  ○ The OIC endeavours **to establish solidarity** among member states.

  ○ To support **restoration of complete sovereignty and territorial integrity** of any member state under occupation.

  ○ To protect, defend and **combat defamation of Islam.**

  ○ To prevent **growing dissention in Muslim societies** and work to ensure that member states take a united stand at the **U. N. General Assembly, Human Rights Council** and other international fora.

➢ **Headquarters:** Jeddah, Saudi Arabia.

  ○ The organisation plans to permanently move its headquarters to **East Jerusalem once the disputed city is 'liberated'.**

  ○ Moreover, it aspires to hold Israel accountable for **'War Crimes'** and violations of international law.

➢ **OIC charter:**

  ○ The organisation **adheres to a charter that lays out its objectives, principles and operating mechanism.**

drishti

○ First adopted in 1972, the **charter has been revised multiple times** in line with emerging conditions in the developing world.

○ The present charter was adopted in March 2008 at Dakar in Senegal.

○ It enshrines that **all members be guided and inspired by the noble Islamic teachings and values** alongside committing themselves to the purposes and **principles of the U. N. charter.**



What is OIC?

OIC- Organization of the Islamic Cooperation

It was founded in **1969**

First OIC Charter Adopted in **1972**

Number of Member Countries **57**

Founding Members **30**

Key Bodies of OIC:
▶ Council of Foreign Ministers
▶ General Secretariat
▶ Islamic Summit
▶ Al-Quds Committee
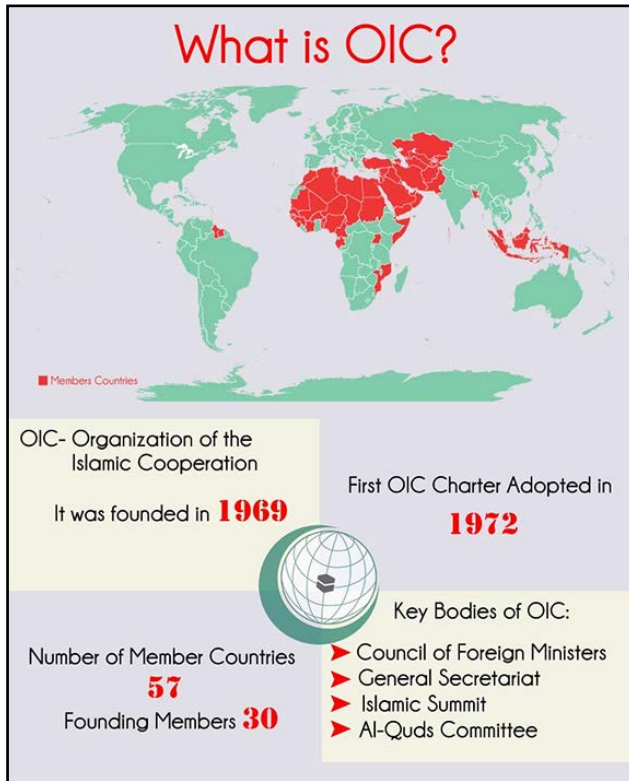
# How does OIC Function?

➢ **Membership:**

○ U. N. members with a **Muslim majority can join the organisation.**

○ The membership is to be **ratified with full consensus** at the OIC's Council of Foreign Ministers.

○ The same provisions apply for **acquiring an observer status.**

➢ **Decision Making:**

○ All decision-making in the forum **requires a quorum defined by the presence of two-thirds of the member states** and complete consensus.

○ In case a consensus cannot be reached, decisions shall be made by a **two-thirds majority of members present and voting.**

○ The Council of Foreign Ministers is the **chief decision-making body and meets annually to decide on how to implement the OIC's general policies.**

● They take decisions and resolutions on matters of common interest, review their progress, consider and approve programmes and their budgets, consider specific issues bothering member states and recommend establishing a new organ or committee.

➢ **Finance:**

○ The OIC is financed by **the member states proportionate to their national incomes.**

● A member's voting rights are **suspended when their arrears equal or exceed the amount of contributions** due from them for the preceding two years.

● The member is **only allowed to vote if the Council of Foreign Ministers is satisfied** that the failure is due to conditions beyond the member's control.

➢ **Islamic Summit:**

○ It is composed of Kings and heads of state, is the **supreme authority of the organisation.**

○ Convening every three years**, it deliberates, takes policy decisions, provides guidance on issues relevant to the organisation** and considers issues of concern to the member states.

➢ **Council of Foreign Ministers:**

○ The Council of Foreign Ministers is the **chief decision-making body and meets annually** to decide on how to implement the OIC's general policies.

● They **take decisions and resolutions on matters of common interest**, review their progress, consider and approve programmes and their budgets, consider specific issues bothering member states and recommend establishing a new organ or committee.

➢ **Standing Committees:**

○ The OIC also has **standing committees for cooperation on information and cultural affairs**, economic and commercial matters, scientific and technological initiatives and for Jerusalem.

Note:

### What are the Criticism of the OIC?

➢ **Prioritise Rights of Muslim Minorities:**

  ○ The OIC had become a premise for 'window dressing', more interested in the rights of Muslim minorities in places such as Palestine or Myanmar than the human rights violations of its member states.

➢ **Incompetent at investigating Human Rights Violations:**

  ○ The body lacks power and resources to investigate human rights violations or enforce its decisions through signed treaties and declarations.

➢ **Centred around Quranic Values:**

  ○ The organisation is largely restricted to **arbitrating in conflicts where both parties are Muslims.**

  ○ This is because the organisation is **centred around Quranic values**, which, it believes, makes it a qualified arbitrator.

➢ **Failed to Establish a Cooperative Venture:**

  ○ The OIC has **failed to establish a cooperative venture** among its members, who were either capital-rich and labour-scarce countries or manpower-rich and capital scarce.

  ○ The organization has **not evolved to become a significant player** either in international politics or in the area of economic cooperation.

### What is the Status of India's relationship with OIC as an organisation?

➢ As a country with the world's **second largest Muslim community**, India had been **invited to the founding conference at Rabat in 1969**, but was humiliatingly ejected at Pakistan's behest.

➢ India **stayed away** because of a multiplicity of reasons:

  ○ It **did not want to join an organisation founded on religion**.

  ○ There was the **risk that improving bilateral relations with individual member states would come under pressure** in a grouping, especially on issues such as Kashmir.

➢ At the 45th session of the Foreign Ministers' Summit in 2018, Bangladesh, the host, suggested that India, where more than 10% of the world's Muslims live, **should be given Observer status, but Pakistan opposed the proposal.**

➢ After building close ties with powerful members such as UAE and Saudi Arabia, **India has been confident of riding over any statement** by the grouping.

  ○ India has consistently underlined that J&K is an "integral part of India and is a matter strictly internal to India", and that the OIC has no locus standi on the issue.

➢ In 2019, India made its **maiden appearance at the OIC Foreign Ministers' meeting**, as a "guest of honour".

➢ This first-time invitation was **seen as a diplomatic victory for India**, especially at a time of heightened tensions with Pakistan following the Pulwama attack.

# India-Israel Relations

### Why in News?

Recently, Israel's Deputy Prime Minister and Defence Minister visited India and held bilateral Meetings and agreed to deepen defence ties.

### What are the Key Highlights of the Visit?

➢ **Joint Declaration:**

  ○ The two Ministers presented a joint declaration marking 30 years of Israel-India relations.

  ○ The declaration reiterated the commitment of both the countries to deepen defence ties.

➢ **India-Israel Vision on Defense Cooperation:**

  ○ Both sides adopted the **India-Israel Vision on Defense Cooperation** to further strengthen the existing framework of the Indo-Israeli defense cooperation architecture.

➢ **A Letter of Intent was Exchanged:**

  ○ A Letter of Intent on enhancing cooperation in the field of futuristic defence technologies was exchanged.

  ○ Bilateral Cooperation will be in line with Prime Minister Modi's Make in India vision.

➢ **Military-To-Military Activities:**

  ○ Both countries reviewed the existing military-to-military activities which have increased despite the challenges due to **Covid-19 pandemic.**

  ○ They discussed ways to increase cooperation in all domains with a focus on Research & Development in future technologies and defence co-production.

Note:

➢ **Acknowledgement of Mutual Security Challenges:**
  ○ Both the Ministers acknowledged mutual security challenges and their convergences on a number of strategic and defence issues.
  ○ They expressed commitment to work together to enhance cooperation in all forums.



Areas which came under Israeli control after the 1967 war.

### *How has the India-Israel Relations been So Far?*

➢ **Diplomatic Ties:**
  ○ Though India officially recognised Israel in 1950, the two countries established full diplomatic ties only on 29th January 1992. As of December 2020, **India was among 164 United Nations (UN)** member states to have diplomatic ties with Israel.

➢ **Economic and Commercial Relations:**
  ○ From USD 200 million in 1992, bilateral merchandise trade stood at USD 4.14 billion (excluding defence) during the period **April 2020 – February 2021 with the balance of trade being in India's favour.**
    ● Trade in diamonds constitutes about 50% of bilateral trade..
  ○ India is **Israel's third-largest trade partner in Asia** and seventh largest globally.

  ● Israeli companies have invested in India in energy, renewable energy, telecom, real estate, water technologies, and are focusing on setting up R&D centers or production units in India.
  ○ India is also in dialogue with Israel for concluding **a Free Trade Agreement (FTA).**

➢ **Defence:**
  ○ India is the **largest buyer of military equipment from Israel**, which, in turn, is the second-largest defence supplier to India, after Russia.
  ○ The Indian armed forces have inducted a wide array of Israeli weapon systems over the years, which range from Phalcon AWACS (Airborne Warning And Control Systems) and Heron, **Searcher-II** and Harop drones to Barak anti-missile defence systems and Spyder quick-reaction anti-aircraft missile systems.
  ○ The acquisitions also include a host of Israeli missiles and precision-guided munitions, from Python and Derby air-to-air missiles to Crystal Maze and Spice-2000 bombs.
  ○ At the **15th Joint Working Group (JWG 2021)** meeting on Bilateral Defence Cooperation, countries agreed to form a Task Force to formulate a comprehensive Ten-Year Roadmap to identify new areas of cooperation.

➢ **Cooperation in Agriculture:**
  ○ In May 2021, **"a three-year work program agreement"** for development in agriculture cooperation, was signed.
  ○ The programme aims to grow existing Centres of Excellence (CoE), establish new centers, increase CoE's value chain, bring the Centres of Excellence into the self-sufficient mode, and encourage private sector companies and collaboration.

➢ **Science & Technology:**
  ○ Recently, experts from India and Israel deliberated on widening the scope of India-Israel Industrial R&D and Technological Innovation Fund (I4F) at its 8th Governing Body meeting.
  ○ They approved 3 joint R&D projects worth 5.5 million USD and suggested measures to create a broader India-Israel collaborative ecosystem.
    ● I4F is a cooperation between the two countries to promote, facilitate and support joint industrial R&D projects between companies from India and Israel to address the challenges in the agreed 'Focus Sectors'.

➢ **Others:**
- ○ Israel is also joining the India-led **International Solar Alliance (ISA),** which aligns very well with the objectives of both countries to scale up their cooperation in **renewable energy** and partner in clean energy

# India-Bangladesh Railway Links Restored

## *Why in News?*

Two years after train services were stopped due to the onset of the Covid-19 pandemic, passenger train services between India and Bangladesh resumed recently.

➢ The following trains have been flagged off after the resumption of train services:
- ○ **Bandhan Express** from **Kolkata to Khulna**
- ○ **Maitree Express** from **Dhaka to Kolkata.**
- ○ **Mitali Express** from **New Jalpaiguri to Dhaka**

## *What are other Important Rail Links Between India and Bangladesh?*

➢ **Petrapole** (India)-**Benapole** (Bangladesh),
➢ Gede (India)-Darshana (Bangladesh),
➢ Singhabad (India)-Rohanpur (Bangladesh),
➢ Radhikapur (India)-Birol (Bangladesh),
➢ **Haldibari** (India)-**Chilahati** (Bangladesh).
➢ Agartala (India)- Akahaura(Bangladesh)



RAIL LINKS ON **INDO-BANGLA BORDER**
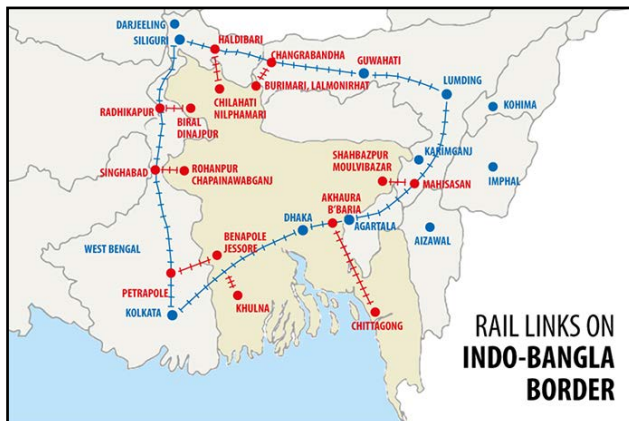
## *Indo-Bangladesh ties*

➢ **Historical Ties:**

○ Fifty years ago, the Bangladesh Liberation War in 1971 had added the colours of victory for India as it led the charge towards the formation of the new nation of Bangladesh.

➢ **Defence Cooperation:**
- ○ **Joint exercises:**
  - • **SAMPRITI (Army).**
  - • TABLE TOP (Air).
  - • IN-BN CORPAT **(Navy).**
  - • **Exercise Bongosagar (Navy).**
  - • **SAMVEDNA** (Multinational Humanitarian Assistance and Disaster Relief (HADR) Exercise with Bangladesh, Nepal, Sri Lanka and UAE)
- ○ Border Management: India and Bangladesh share **4096.7 km. of border**, which is the longest land boundary that India shares with any of its neighbours.

➢ **Economic Relations:**
- ○ Bangladesh is **India's largest trading partner i**n the sub-continent with the total bilateral trade between the two nations standing at USD 9.5 billion (2019-20), down compared to the previous fiscal (2018-19), having crossed USD10 billion.
- ○ India's exports to Bangladesh account for more than 85% of the total bilateral trade.
- ○ In December 2020, to further boost the bilateral trade cooperation, an **India-Bangladesh CEO's Forum** was launched.
- ○ Bangladesh has appreciated the Duty-Free and Quota Free access given to Bangladeshi exports to India under **South Asian Free Trade Area (SAFTA)** since 2011.

➢ **Cooperation in Connectivity:**
- ○ In March 2021, **Maitri Setu–a 1.9 km bridge** built over Feni River joining **Sabroom in India** and **Ramgarh in Bangladesh** was inaugurated.
- ○ Protocol on **Inland Water Transit and Trade** (PIWTT).
- ○ **Bangladesh-Bhutan-India-Nepal (BBIN) Motor Vehicles Agreement** is in pipeline**.**

➢ **Partnership on Multilateral forums:**
- ○ **South Asian Association for Regional Cooperation (SAARC).**
- ○ **Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC).**
- ○ **Indian Ocean Rim Association (IORA).**

Note:

- ➢ **Other Developments:**
  - ○ **Line of Credit:**
    - ● India has extended 3 Lines of Credits (LOC) to Bangladesh in the last 8 years amounting to USD 8 billion for development of infrastructure in sectors including roads, railways, shipping and ports.
  - ○ **Covid-19 Support:**
    - ● Bangladesh is the biggest recipient of Made-in-India **Covid-19** vaccine doses, accounting for 16% of the total supplies.
    - ● India also offered collaboration in therapeutics and partnership in vaccine production.
- ➢ **Emerging Disputes:**
  - ○ Bangladesh has already raised concerns over roll out of the **National Register of Citizens (NRC)** in Assam, an exercise carried out to identify genuine Indian citizens living in Assam and weed out illegal Bangladeshis.
  - ○ Currently, Bangladesh is an active partner of the **Belt and Road Initiative (BRI)** that Delhi has not signed up to.
  - ○ In the security sector, Bangladesh is also a major recipient of Chinese military inventory, including submarines.

# The International Day of UN Peacekeepers

### *Why in News?*

International Day of **UN (United Nations) Peacekeepers** is observed globally on **29th May**.

- ➢ **Theme for 2022:** People. Peace. Progress. The Power of Partnerships.

### *What is UN Peacekeeping?*

- ➢ **About:**
  - ○ UN Peacekeeping began in 1948 when the UN Security Council authorized the deployment of UN military observers to the Middle East.
  - ○ UN Peacekeeping helps countries navigate the difficult path from conflict to peace.
  - ○ It deploys troops and police from around the world, integrating them with civilian peacekeepers to address a range of mandates set by the **UN Security Council (UNSC) and the General Assembly.**

- ➢ **Composition:**
  - ○ UN peacekeepers (often referred to as Blue Berets or Blue Helmets because of their light blue berets or helmets) can include **soldiers, police officers, and civilian personnel.**
  - ○ Peacekeeping forces are **contributed by member states on a voluntary basis.**
  - ○ Civilian staff of peace operations are international civil servants, recruited and deployed by the UN Secretariat.
- ➢ **UN Peacekeeping and India:**
  - ○ India has been among the **largest troop-contributing countries to the UN peacekeeping missions.** As of November 2021, India is the second-highest military (1,888) and fifth-highest (139) police-contributing country to the United Nations Organisation Stabilization Mission in the Democratic Republic of the Congo (MONUSCO).
  - ○ More than 200,000 Indians have served in 49 of the 71 UN peacekeeping missions established around the world since 1948.
  - ○ India has a long tradition of sending women on UN peacekeeping missions.
  - ○ In 2007, India became the first country to deploy an all-women contingent to a UN peacekeeping mission.
  - ○ Despite its presence in several countries as part of the Peacekeeping missions, India has routinely **expressed its displeasure at a similar mission headquartered in Srinagar and Islamabad.**
    - ● The United Nations Military Observer Group in India and Pakistan (UNMOGIP) was established in January, 1949 to supervise the ceasefire between India and Pakistan.
    - ● India has reiterated that the mission has "outlived its relevance" after the Simla Agreement was signed by India and Pakistan in July 1972 and the establishment of the LoC (Line of Control).

# UN Report on the Taliban Regime

### *Why in News?*

According to the **United Nations Security Council (UNSC)**'s **Analytical Support and Sanctions Monitoring Team,** foreign terrorist organisations continue to enjoy safe haven under the new Taliban regime.

## What is the Mission of the UNSC's Monitoring Team?

➢ The monitoring team **assists the UNSC sanctions committee** and its report, circulated among committee members, informs the **formulation of UN strategy in Afghanistan.**

➢ **India is currently the chair of the sanctions committee**, which comprises all the 15 UNSC members.

➢ This report is the **first since the Taliban returned to power** in August 2021.
  ❍ This is the **first of its reports not informed** by official Afghan briefings.

➢ The **team collected data by consulting with UN member states,** international and regional organisations, private sector financial institutions, and the work of bodies such as the **United Nations Assistance Mission in Afghanistan (UNAMA).**
  ❍ UNAMA is a **UN Special Political Mission established to assist the state and the people of Afghanistan** in laying the foundations for sustainable peace and development.

## How has India approached Afghanistan since the Taliban Regime?

➢ **Ways of Engagement:**
  ❍ After the Taliban takeover, India is caught in the middle of this dilemma divided between restoring Afghanistan as a strategic priority in its policy and the practical hurdles on the ground.
  ❍ Currently, **India is assessing three broad ways of potential engagement with Afghanistan:**

  ● providing humanitarian assistance, exploring a joint counterterrorism effort with other partners, and engaging in talks with Taliban.
  ❍ The end goal of all these is to **restore people-to-people links and prevent backsliding** of the gains Delhi's developmental aid has made in Afghanistan in the past two decades.
    ● India has undertaken more than **400 key infrastructure projects** in all 34 Afghan provinces and has signed strategic agreements to enhance trade and bilateral relations.

## How has Terrorism affected the Relations between the two?

➢ India's policies toward Afghanistan have been underpinned by the terrorism threat that emanates from Pakistan.
  ❍ India is cautious about a terror corridor that might be facilitated from eastern Afghanistan leading up to Kashmir, should a land-based link be established.

➢ India has **consistently reaffirmed its support for UNSC Resolution 2593** and staunchly maintains that Afghan soil should not be used for anti-India terrorist activities.

➢ Counterterrorism is likely to play an increasingly pertinent role in shaping India's policies vis-à-vis Afghanistan, even as India seeks an alignment in its broader Indo-Pacific obligations and its immediate South Asian goals.

➢ India has demonstrated a growing interest in developing more robust counter-terror approaches across various multilateral fora, including the UNSC and the **Shanghai Cooperation Organisation.**

## Why is Afghanistan Significant for India?

➢ **Economic and Strategic Interest:** Afghanistan is a gateway to the oil and mineral-rich Central Asian republics.
  ❍ Afghanistan's main advantage is its geography, as anyone who is in power in Afghanistan controls the land routes connecting India with Central Asia (via Afghanistan).
  ❍ **Located at the heart of the historic Silk Road**, Afghanistan was long the crossroads of commerce between Asian countries connecting them to Europe, and enhancing religious, cultural, and commercial contacts.

➢ **Developmental Projects:** The massive reconstruction plans for the country to offer a lot of opportunities for Indian companies.
  ○ **Three major projects:** the Afghan Parliament, the Zaranj-Delaram Highway, and the Afghanistan-India Friendship Dam **(Salma Dam)**, along with India's assistance of more than USD3 billion in projects, hundreds of small development projects (of schools, hospitals and water projects) have cemented India's position in Afghanistan.

➢ **Security Interest:** India has been the **victim of state-sponsored terrorism emanating from Pakistan supported terrorist group** operating in the region (e,g. Haqqani network). Thus, India has two priorities in Afghanistan:
  ○ to prevent Pakistan from setting up a friendly government in Afghanistan, and
  ○ to avoid the return of jihadi groups, like al Qaeda, which could strike in India.

# China's Expansion in the Pacific Island Countries

## Why in News?

The Foreign Minister of China is currently on a **visit to ten Pacific Island Countries (PICs)** and has co-hosted with Fiji the Second China-Pacific Island Countries Foreign Ministers Meeting.

➢ However, China's effort to push through a comprehensive framework deal **failed to gain consensus among the PICs at the meeting.**

➢ In April 2022, China signed a **controversial security deal with the Solomon Islands**, which raised regional concerns.

## What are Pacific Islands Countries?

➢ The Pacific Island Countries are a **cluster of 14 states which are located largely in the tropical zone of the Pacific Ocean** between Asia, Australia and the Americas.
  ○ They include Cook Islands, Fiji, Kiribati, Republic of Marshall Islands, Federated States of Micronesia (FSM), Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.
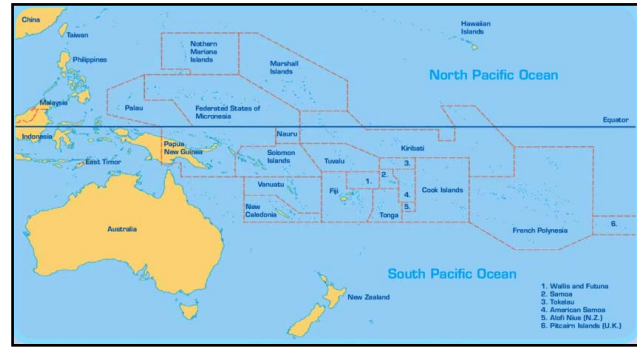


## What is the Significance of the PICs?

➢ **Largest Exclusive Economic Zones (EEZs):**
  ○ The islands are **divided on the basis of physical and human geography** into three distinct parts — **Micronesia, Melanesia and Polynesia.**
  ○ Despite their small land area, the i**slands are spread out over a wide swath of the Pacific Ocean.**
  ○ As a result, though they are some of the smallest and least populated states, they have **some of the largest Exclusive Economic Zones (EEZs) in the world.**

➢ **Economic Potential:**
  ○ Large EEZs have a **great deal of economic potential** since they can be used to exploit the wealth of fisheries, energy, minerals, and other marine resources present there.
    ● Hence, they prefer to be **identified as Big Ocean States, rather than Small Island States.**
  ○ In fact, Kiribati and FSM, both PICs, have EEZs larger than that of India.

➢ **Role in Major Power Rivalry:**
  ○ These **countries have played an important role in major power rivalry** as springboards for power projection and laboratories for developing and demonstrating strategic capabilities.
  ○ The **major powers of the colonial era competed with each other** to gain control over these strategic territories.
  ○ The Pacific islands also **acted as one of the major theatres of conflict** during the **Second World War** — between imperial Japan and the U.S.

➢ **Major Nuclear Weapon Test Sites:**
  ○ **Some of the major nuclear weapon test sites of the U.S., the U.K. and France were located here** due to the remoteness of these islands from the Soviet Union and major population centres of the world.

Note:

- ➤ **Potential Vote Bank:**
  - ○ The 14 PICs, **bound together by shared economic and security concerns,** account for as many votes in the United Nations, and act as a potential vote bank for major powers to mobilise international opinion.

## *What is the Significance of PICs for China?*

- ➤ **Become an Effective Blue Water Capable Navy:**
  - ○ The PICs lie in the **natural line of expansion of China's maritime interest** and naval power.
  - ○ They are **located beyond China's 'First Island Chain'**, which represents the country's first threshold of maritime expansion.
  - ○ The PICs are **located geostrategically** in what is referred to by China as its **'Far Seas'**, the control of which will make China an **effective Blue Water capable Navy** — an essential prerequisite for becoming a superpower.

- ➤ **Countering Quad:**
  - ○ The **need to influence the PICs have become an even more pressing matter for China** at a time when the **Quadrilateral Security Dialogue** has emerged as a major force in the **Indo-Pacific** vis-à-vis China.

- ➤ **Role of Taiwan:**
  - ○ Apart from the vast marine richness of the PICs, the **Taiwan factor plays a major role in China's Pacific calculus.**
    - ● **China, which considers Taiwan to be a breakaway territory**, is preparing for what seems like an inevitable military invasion.
  - ○ In this context, it **becomes important to break Western domination of island chains** of the Pacific which could impede reunification.
  - ○ Wooing the PICs away from the West and Taiwan will **therefore make the goal of Taiwan's reunification easier for China.**
    - ● China has been successful in getting diplomatic recognition from 10 out of the 14 PICs through its economic largesse.
    - ● Only four PICs — Tuvalu, Palau, Marshall Islands and Nauru, currently recognise Taiwan.

## *What are the Implications of China's Latest Move?*

- ➤ **May Drag PICs into Major power Conflicts:**
  - ○ The **PICs as a collective did not agree to China's extensive and ambitious proposals**, and therefore China failed to get a consensus on the deal.
  - ○ Signing the economic and security deal proposed by China, **could have negative implications for the sovereignty and unity of PICs** and may drag them into major power conflicts in the future.

- ➤ **Made Traditional Powers in the Region More Cautious:**
  - ○ The **intensification of China's diplomacy towards the Pacific Islands** have made the powers who have traditionally controlled the regional dynamics like the US and Australia more cautious.
  - ○ The US has **started revisiting its diplomatic priority for the region** ever since the China-Solomon Islands deal.
  - ○ The role played by the US in mobilising opposition against China's proposed deal could not be ruled out as the **Federated States of Micronesia (FSM)** is the only country which recognises China and at the same time is part of the Compact of Free Association with the US.
    - ● The Federated States of Micronesia is a country spread across the western Pacific Ocean comprising more than 600 islands.

## *What are the Highlights of the India-PICs Relations?*

- ➤ **About:**
  - ○ India's interaction with the PICs is **still largely driven by the presence of sizeable Indian Diaspora** in the region.
    - ● Nearly 40% of Fiji's population is of Indian origin and about 3000 Indians living in Papua New Guinea at present.
  - ○ In terms of institutional engagements, India participates in the **Pacific Island Forum (PIF)** as one of the key dialogue partners of the Forum.
  - ○ The most important development in facilitating India's interaction with the PICs in recent years has been the formation of an action-oriented **Forum for India and Pacific Islands Cooperation (FIPIC).**
    - ● FIPIC, a multinational grouping, was launched in 2014.

Note:

➤ **Areas of Cooperation:**

○ **Blue Economy:**

● The PICs with their **resource-rich EEZs can be attractive sources of natural resources like Liquefied natural gas (LNG) and hydrocarbons** to fuel India's growing economy and can also provide new markets.

● India can engage with these countries particularly, given its own emphasise on the idea of **'Blue Economy'.**

○ **Climate Change and Sustainable Development:**

● The geography of these island countries makes them vulnerable to the adverse effects of climate challenges.

■ The increasing soil salinity due to the **rising sea level** threatens the low lying island states, also giving rise to the problem of displacement.

● Therefore, **climate change and sustainable development are crucial areas of concern** where a closer partnership can be developed for effective and concrete solutions.

○ **Disaster Management:**

● Most of the Pacific Island countries are prone to a variety of natural disasters, with widespread social, economic and environmental consequences.

● India can assist in building capacities of Disaster Risk Resilience.

● In September 2017, India launched Climate Early Warning Systems in seven PICs.

## *Way Forward*

➤ PICs while geographically small yet they have **considerable economic, strategic and political significance** in international affairs.

➤ The recent efforts to engage with the region have brought India much closer to these countries.

➤ India's **approach towards the PICs focuses on a transparent, need-based approach and inclusive relationship** with the region based on shared values and a shared future.

➤ In the coming year**s India's engagement with the PICs is expected to grow deeper** with the third FIPIC summit scheduled to be held soon.

# Trincomalee Port of Sri Lanka

## *Why in News?*

Sri Lanka plans to develop Trincomalee port into an industrial hub that would spark global interest.

➤ The proposal is a long-standing plan to monetise land that belongs to the **Sri Lanka Port Authority,** by getting foreign and local investment for **a special economic zone, an industrial park, or an energy hub.**
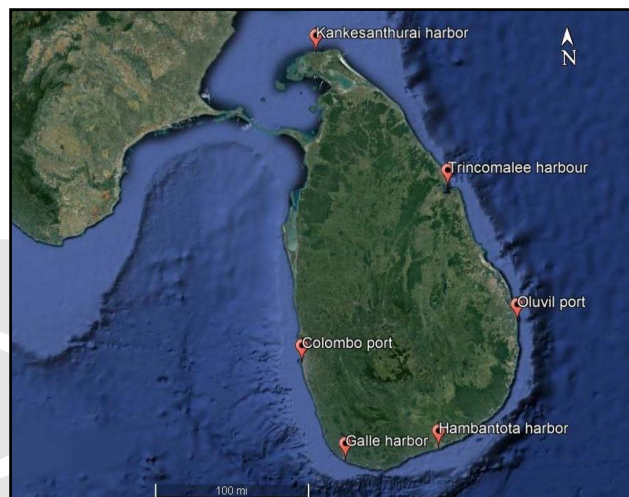


## *What are the Key Highlights?*

➤ **About Trincomalee Port:**

○ Trincomalee harbour is **on the northeastern coast of Sri Lanka.** It is situated on a peninsula in Trincomalee Bay—formerly called Koddiyar Bay.

○ Trincomalee is the **nearest port to Chennai**, India.

➤ **Significance of the Port:**

○ **Geopolitical and Strategic Significance:** The location of this port in Indian ocean has strategic significance, it has been of interest to several countries, including India, Japan and the US.

● Japan commissioned the **2020 ADB (Asian Development Bank) study** on the development of Trincomalee port.

○ **Dedicated Port Terminal:** Trincomalee already has several dedicated port terminals —it has Lanka Indian Oil Company facility, Tokyo Cement facility, and grain facility for a flour factory, and a tea terminal.

● There is also **a jetty for bulk cargo such as coal, gypsum and cement.**

Note:

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○ **Decongest Other Ports:** This development will decongest and help in offloading operations at **Colombo Port** which will increase the supply chain.

○ **Non-Containerised Cargo Traffic**: This would also entail the development of the port for non-containerised cargo traffic, such as cement, coal or other industrial raw material.

### What does the deal mean for India?

➢ **Natural Harbour:** It offers one of Asia's finest natural harbours which India will benefit from.

➢ **Balance China's influence:** This port will serve as a way to balance China's influence in the Indian Ocean Region. China already has access to **Hambantota Port**, so Trincomalee port is important for India.

➢ **Maritime Trade Routes:** If Indian companies engage in this development, it will enhance Indian maritime trade routes in the region.

○ Earlier this year, **Lanka Indian Oil Company and Ceylon Petroleum Corporation** signed an agreement to develop a massive oil storage tank farm built during British rule at Trincomalee. This agreement will benefit from this deal.

# Industry Transition Dialogue between India and Sweden

### Why in News?

Recently, India and Sweden hosted the **Industry Transition Dialogue** in Stockholm, as a part of their joint initiative i.e. **Leadership for Industry Transition (LeadIT).**

➢ This high level dialogue has contributed to the UN Conference '**Stockholm+50**' and set the agenda for COP27 (Climate Change).

### What is LeadIT?

➢ **About:**

○ The LeadIT initiative **lays specific focus on hard to abate sectors** that are key stakeholders in the global climate action and require specific interventions.

○ It gathers **countries and companies that are committed to action** to achieve the **Paris Agreement.**

○ It was launched by the **governments of Sweden and India at the UN Climate Action Summit** in 2019 and is supported by the **World Economic Forum.**

○ LeadIT members subscribe to the notion that energy-intensive industry can and must progress on low-carbon pathways, aiming to achieve **net-zero carbon emissions** by 2050.

➢ **Members:**

○ The total membership of LeadIT is 37 including countries and companies together.

● Japan and South Africa, the latest members of the initiative.

### What are the Highlights of India - Sweden Relations?

➢ **Political Relations:**

○ Diplomatic relations were **established in 1948** and steadily strengthened over the decades.

○ The first **India-Nordic Summit** (India, Sweden, Norway, Finland, Iceland and Denmark) took place in the year 2018 in Sweden.

○ Sweden also participated in the **First India Nordic Baltic** (including Estonia, Latvia and Lithuania) Conclave co-chaired by India in November 2020.

○ In May 2022, the **Prime Minister of India held a series of bilateral meetings** with his counterparts from Denmark, Norway, Sweden, Iceland and Finland.

➢ **Multilateral Engagement:**

○ In the 1980s India and Sweden worked together on nuclear disarmament issues within the framework of the **'Six Nation Peace Summit'** (that also included Argentina, Greece, Mexico and Tanzania).

○ At the UN General Assembly, **India and Sweden present an annual Joint Statement on Humanitarian Affairs.**

○ In 2013, during the Swedish Presidency, India joined the **Arctic Council** as an Observer at the Kiruna Ministerial Meeting.

➢ **Economic and Commercial relations:**

○ **India is Sweden's third-largest trade partner** after China and Japan in Asia.

○ Trade in goods and services has increased from USD 3 billion (2016) to USD 4.5 billion (2019).

➢ **Defence and Aerospace (Sweden-India Joint Action Plan 2018):**

○ It highlights collaboration on space research, technology, innovation, and applications.

# India Vietnam Partnership

## *Why in News?*

Recently, Indian Defence Minister visited Vietnam, where he signed some Defence Agreements, which will significantly enhance the scope and scale of existing defence cooperation.

➢ India and Vietnam are marking **50 years of the establishment of bilateral diplomatic relations.**

➢ Earlier, **India and Vietnam** signed a **Letter of Intent (LOI)** to collaborate in the field of digital media, paving the way for further strengthening the partnership between the two countries.



## *What are the Key Highlights of the Visit?*

➢ **India-Vietnam Defence Partnership towards 2030:**
  ○ Both the Defence Ministers signed the **'Joint Vision Statement on India-Vietnam Defence Partnership towards 2030'** to bolster bilateral defence cooperation.

➢ **Defence Line of Credit:**
  ○ The two ministers agreed on the finalisation of the **USD 500 million Defence Line of Credit extended to Vietnam** with implementation of the projects under it adding substantially to Vietnam's defence capabilities and **furthering the government's vision of 'Make in India, Make for the World.'**

➢ **Mutual Logistics Support:**
  ○ Both inked a Memorandum of Understanding (MoU) on **Mutual Logistics Support**.
  ○ This is a **major step towards simplifying procedures for mutually beneficial logistic support and is the first such major agreemen**t which Vietnam has signed with any country.
  ○ India has signed several logistics agreements including all **Quad countries,** France, Singapore and South Korea beginning with the Logistics Exchange Memorandum of Agreement with the U.S. in 2016.
  ○ Logistics agreements are administrative arrangements facilitating access to military facilities for exchange of fuel and provisions on mutual agreement simplifying logistical support and increasing operational turnaround of the military when operating away from India.

➢ **Simulators and a Monetary Grant:**
  ○ India will gift **two simulators and a monetary grant towards setting up of Language and IT (Information Technology) Lab** at the Air Force Officers Training School for capacity building of the Vietnamese Armed Forces.

## *How has been the India-Vietnam Relations?*

➢ **Background:**
  ○ While defence cooperation has been one of the most significant pillars of the **Comprehensive Strategic Partnership** initiated by the two countries in 2016, the relationship between the two countries was established much earlier.

Note:

- India had established the Consul General's office in Hanoi as early as 1956.
  - Vietnam established its diplomatic mission in 1972.
- India had stood by Vietnam in opposing US intervention in that country at the cost of embittering Indo-US relations.
- The relationship was further strengthened when India, in the early 1990s, initiated its **"Look East Policy"** with the specific objective of economic integration and political cooperation with Southeast Asia and East Asia.

➢ **Areas of Cooperation:**
- **Strategic Partnership:**
  - India and Vietnam agreed to strengthen their strategic partnership "in line with **India's Indo-Pacific Oceans Initiative (IPOI) and the ASEAN's** Outlook on Indo-Pacific to achieve shared security, prosperity and growth for all in the region."
- **Economic Cooperation:**
  - Trade and economic relations for mutual benefit, which have significantly improved over the years particularly after the **ASEAN- India Free Trade Agreement** was signed.
  - India realises that Vietnam is a potential regional power in South East Asia with great political stability and substantial economic growth.
  - India is investing in development and capacity assistance for Vietnam through quick impact projects (QIP), proposals in the area of water resource management in **Vietnam's Mekong Delta region, Sustainable Development Goals (SDGs), and digital connectivity.**
- **Trade relations:**
  - During the **Financial Year (FY) April 2020 – March 2021**, bilateral trade between India and Vietnam reached USD 11.12 billion.
    - Indian exports to Vietnam amounting to USD 4.99 billion and Indian imports from Vietnam at USD 6.12 billion.
- **Defence Cooperation:**
  - While Vietnam is interested in modernising its armed forces, India is interested in developing defence capabilities of its South-East Asian partners sufficiently to maintain peace in the strategic region.

- Vietnam is interested in India's **Akash surface-to-air systems and Dhruv advanced light helicopters and Brahmos missiles.**
- Apart from this, the defence relations include capacity building, dealing with common security concerns, training of personnel, and cooperation in defence R&D.
- Indian Naval Ship INS Kiltan undertook a visit to Ho Chi Minh City in 2020 to deliver flood relief materials for the people of Central Vietnam (**Mission Sagar III)**.
  - It also participated in the **PASSEX Exercise** with the Vietnam People's Navy.
- The China factor also weighs heavily in the respective strategic calculus of India and Vietnam.
  - Both countries had fought wars with China and both have border problems with that country. China aggressively continues to encroach in the territories of the two countries.
  - Hence, it is natural for both the countries to come closer with a view to restrain China from its aggressive actions.

- **Cooperation at Multiple Fora:**
  - At the **UN Security Council**, both India and Vietnam are serving concurrently as non-permanent members in 2021.
  - India and Vietnam closely cooperate in various regional forums such as **East Asia Summit,** Mekong Ganga Cooperation, **Asia Europe Meeting (ASEM).**
- **People-to-People Contacts:**
  - The year 2019 was celebrated as the ASEAN-India Year of Tourism. Both countries have facilitated a simplified visa regime to promote bilateral tourism.
  - The Embassy of India organised various events to celebrate Mahatma@150 in 2018-19. These include Jaipur artificial limb fitment camps, which were organised in four provinces of Vietnam, benefitting 1000 people, under the **'India for Humanity' initiative** of the Government of India.

### *Way Forward*

➢ In 2016, the first time in 15 years, an Indian Prime Minister visited Vietnam signaling India is no longer hesitant to expand its presence in China's periphery.

Note:

➢ India's foreign policy envisages India to play an anchor for peace, prosperity and stability in Asia and Africa, deepening ties with Vietnam will only strengthen this narrative.

➢ As India and Vietnam geographically lie at the heart of the emerging Indo-Pacific construct, both would play a major role in this strategic space which is becoming a core theatre for competition for power and influence amongst the major powers.

➢ The strategic partnership under the broad India-Vietnam cooperation framework would be critical towards building the vision laid out under **India's 'Act East' Policy**, which looks to expand engagement that is mutually positive and which ensures inclusive growth for all in the region.

➢ Strengthening ties with Vietnam will eventually lead a step towards the realisation of **SAGAR (Security and Growth all in the region)** initiative as hailed by the Indian PM.

➢ India and Vietnam both can mutually benefit each other in the arena of Blue Economy and ocean security.

# Shanghai Cooperation Organization (SCO)

## *Why in News?*

The Union Cabinet was apprised about the Agreement signed among the **Shanghai Cooperation Organisation (SCO)** member states on cooperation in the field of youth work among the authorized bodies of the member states of SCO.

➢ Following adoption of the agreement on cooperation in youth work by the member states in 2021, the agreement was signed by the Indian Minister of Youth Affairs and Sports.

## *What are the Key Highlights of the Agreement?*

➢ **Objective:**
  ○ To **strengthen mutual trust,** friendly relations and cooperation among young people of SCO member States.
  ○ Recognizing the importance of **ensuring the development of youth cooperation** as an element of deepening friendly relations **among the SCO Member States.**

○ Seeking to further **improve the conditions for youth cooperation** based on international experience.

➢ **Areas of Cooperation:**
  ○ Strengthen cooperation in the field of work with youth and public youth organizations (associations) implementing state youth policy,
  ○ Support initiatives aimed at enhancing international youth cooperation,
  ○ **Training of professional staff** in the sphere of work with youth;
  ○ **Exchange of scientific, reference and methodological materials,** work experience of state bodies, youth public organizations, other organizations and associations involved in the implementation of state youth policy and support of youth initiatives;
  ○ Carrying out **joint research and activities** on various youth policy issues and youth cooperation;
  ○ **Exchange of scientific publications, research works** on topical issues of preventing youth involvement in destructive structures;
  ○ **Promote joint economic and humanitarian initiatives** aimed at engaging youth in entrepreneurship and innovative projects to increase their employment and well-being;
  ○ Supporting the activities of the **SCO Youth Council.**
    ● The SCO Youth Council was **created in 2009** at the initiative of the Youth Organizations of the SCO member states.

## *What is Shanghai Cooperation Organization (SCO)?*

➢ **About:**
  ○ 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.
  ○ The SCO Charter was signed in 2002, and entered into force in 2003.

➢ **Genesis:**
  ○ Prior to the creation of SCO in 2001, **Kazakhstan, China, Kyrgyzstan, Russia and Tajikistan** were members of the **Shanghai Five.**

Note:

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- ○ Shanghai Five (1996) emerged from a series of border demarcation and demilitarization talks which the four former Soviet republics held with China to ensure stability along the borders.
- ○ Following the **accession of Uzbekistan to the organization in 2001**, the **Shanghai Five was renamed the SCO.**
- ○ **India and Pakistan** became members in **2017.**
- ○ On 17th September, **2021,** it was announced that **Iran would become a full member of the SCO.**

➢ **Objectives:**
- ○ Strengthening mutual trust and neighborliness among the member states.
- ○ Promoting effective cooperation in -politics, trade & economy, research & technology and culture.
- ○ Enhancing ties in education, energy, transport, tourism, environmental protection, etc.
- ○ Maintain and ensure peace, security and stability in the region.
- ○ Establishment of a democratic, fair and rational new international political & economic order.

➢ **Membership:**
- ○ Kazakhstan, China, Kyrgyzstan, Russia, Tajikistan, Uzbekistan, India, Pakistan and Iran.

➢ **Structure:**
- ○ **Heads of State Council** – The supreme SCO body which decides its internal functioning and its interaction with other States & international organisations, and considers international issues.
- ○ **Heads of Government Council** – Approves the budget, considers and decides upon issues related to economic spheres of interaction within SCO.
- ○ **Council of Ministers of Foreign Affairs** – Considers issues related to day-to-day activities.



THE STRUCTURE OF THE SHANGHAI COOPERATION ORGANISATION
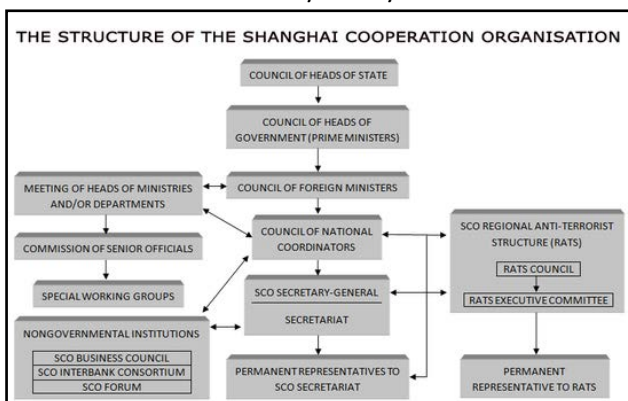
- ○ **Regional Anti-Terrorist Structure (RATS)** – Established to combat terrorism, separatism and extremism.

➢ **SCO Secretariat** – Based in Beijing to provide informational, analytical & organizational support.

➢ **Official language:**
- ○ The official working language of the SCO Secretariat is Russian and Chinese.

# Israel Signs Free Trade Deal with UAE

## *Why in News?*

Recently, **Israel signed a free trade deal with the United Arab Emirates, its first with an Arab country**, building on their US-brokered normalization of relations in 2020.

➢ The UAE was the first Gulf country to normalize ties with Israel and only the third Arab nation to do so after Egypt and Jordan.



## *What are the Key Highlights?*

➢ **Trade between the Two Countries:** In comparison to 2020, Israel's Central Bureau of Statistics recorded more than a 30% increase in import and export of goods, excluding diamonds, to and from the United Arab Emirates.
- ○ Two-way trade in 2021 totaled some USD 900 million.
- ○ Non-oil trade surpassed reached USD 1.06 billion in the first three months of 2022 - a fivefold increase from the same period last year.

Note:

➢ **Significance of the Free Trade Deal:**
  ○ **Builds on the US-brokered Normalisation of Relations:** The deal shows the durability of a series of diplomatic deals in 2020 known as the **Abraham Accords,** which normalized relations between **Israel** and four Muslim countries—the **U.A.E., Bahrain, Morocco and Sudan.**
  ○ **Great Economic Potential:**
    ● Israel's relationship with the UAE has **great economic potential** due to the geographic and cultural proximity between the peoples, as well as the UAE's unique characteristics.
    ● The **UAE** is the **second largest economy** in the **Arab world (after Saudi Arabia)**, with significant weight placed on technology products and advanced solutions, where Israel holds a relative advantage.
  ○ **Faster Access to Markets and Lower Tariffs:**
    ● Businesses in both countries will benefit from faster access to markets and lower tariffs as these nations work together to increase trade, create jobs, promote new skills and deepen cooperation.
    ● The deal abolishes customs duties on 96% of the products exchanged between the two sides.
    ● The agreement also relates to regulatory and standardisation issues, customs, collaboration, government procurement, e-commerce and intellectual property rights.
  ○ **Boost up Trade:**
    ● This deal will push **the value of non-oil bilateral** trade between Israel and the UAE beyond $10 billion.
    ● UAE-Israel trade will exceed $2 billion in 2022, rising to around $5 billion in five years, bolstered by collaboration in renewables, consumer goods, tourism and the life sciences sectors.
  ○ **Israel can Gain foothold in International Market:**
    ● A long-term hope for both countries is that Israeli companies will set up manufacturing in the U.A.E., which serves as a hub for the Middle East, Asia and Africa—markets where Israel has struggled to gain a foothold.

## *What is the Significance for India?*

➢ This agreement, jointly with the **Comprehensive Economic Partnership Agreement (CEPA)** signed between India and the UAE, has the potential for **extensive trilateral cooperation and business partnerships.**
➢ It has also further created opportunities for collaborations in different fields with the US.
  ○ These were made possible by the Abraham Accords, which have been a significant turning point in promoting peace and prosperity for all.
➢ Israel, India, the UAE, and the US are also part of a new grouping, **West Asian Quad** which was established as a forum for economic cooperation.
  ○ They are pursuing a constructive agenda focused on the economy, especially i**nfrastructure projects.**

**What is a Free Trade Agreement?**

➢ FTAs are arrangements between two or more countries or trading blocs that primarily agree to reduce or eliminate customs tariff and non-tariff barriers on substantial trade between them.
➢ FTAs normally cover trade in goods (such as agricultural or industrial products) or trade in services (such as banking, construction, trading etc.).
➢ FTAs can also cover other areas such as intellectual property rights (IPRs), investment, government procurement and competition policy etc.
  ○ **Example:** India has negotiated FTA with many countries e.g. Sri Lanka and various trading blocs as well e.g. **ASEAN.**
➢ FTAs can be categorised as Preferential Trade Agreement, **Comprehensive Economic Cooperation Agreement, Comprehensive Economic Partnership Agreement (CEPA).**

# Australia India Water Security Initiative (AIWASI)

## *Why in News?*

The Union Cabinet has approved a MoU (Memorandum of Understanding) between India and Australia on **Technical Cooperation for Australia –India water Security initiative (AIWASI).**

Note:

### What is AIWASI?

➤ AIWASI is a project Under **South Asia Water Security Initiative (SAWASI)** of Department of Foreign Affairs and Trade (DFAT), Australia.

➤ It aims to work towards the **Water Sensitive City vision** which is based on **holistic management** of the **integrated water cycle**.

➤ AIWASI will **strengthen** India's **water governance** and **undertake investments** that **provide**
   ○ urban water services,
   ○ support to disadvantaged communities to access reliable, safe water and sanitation services.

➤ The project will undertake and deliver a **Water Sensitive Urban Design (WSUD) demonstration project**.

➤ This AIWASI project is also a **'living laboratory'** with **multiple educational, social and environmental benefits** like **water literacy** of students and the community, **creation of green spaces**, **improved air quality from blue-green infrastructure and rejuvenation of degraded water bodies and aquifers**.

### What is water security?

The definition of **water security** proposed by **UN-Water** – The capacity of a population to safeguard **sustainable access to adequate quantities of acceptable quality water for sustaining livelihoods,** human well-being, and socio-economic development, for ensuring **protection against water-borne pollution** and **water-related disasters**, and for **preserving ecosystems** in a climate of peace and political stability.

### What are the challenges related to water security in India?

As per the **Sustainable Development Goal report (2019)**

➤ **1 in 4 health care facilities lacks basic water services**

➤ **3 in 10 people lack access to safely managed drinking water services.**

➤ **6 in 10 people lack access to safely managed sanitation facilities**.

➤ At least **892 million people continue to practice open defecation**.

➤ Mostly, **Women and girls** are responsible for water collection in **80% of households without access to water** on the premises.

➤ And if current trends of **over-exploitation** continue, India is set to become a **water-scarce** country in the not-too-distant future.

➤ A rapidly **increasing population** and **urbanization** have **driven up water demands** all across the country.

➤ While years of **pollution**, **inefficient methods of farming**, **decentralized water governance**, **groundwater exploitation** and **poor infrastructure** have **depleted the water supply.**

➤ The map shown below illustrates the **Baseline water stress** condition in India and it can be easily visualized that most part of the country is under the **over-exploited category**.
   ○ Baseline water stress measures total annual water withdrawals (municipal, industrial, and agricultural) expressed as a percent of the total annual available flow.
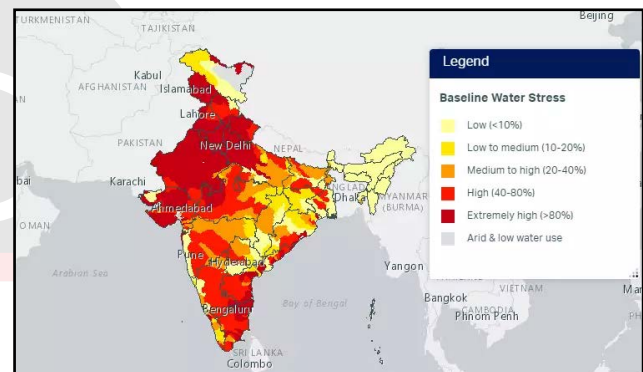


### What are the Related Initiatives?

➤ **Creation of Jal shakti ministry**

➤ **National water mission**

➤ **Jal shakti abhiyan**

➤ **NITI Aayog's Composite Water Management Index**

➤ **Namami Gange**

➤ **Jal Jeevan Mission**

# Aegean Sea

### Why in News?

Recently, Turkish President warned Greece to demilitarize islands in the Aegean Sea.

### What is the Dispute?

➤ **Turkey's Stand:**

Note:

○ Turkey says **Greece has been building a military presence in violation of treaties** that guarantee the unarmed status of the Aegean islands.

● It argues the islands were ceded to Greece on the condition they remained demilitarised.

➤ **Greece Stand:**

○ Greece maintains **Turkey has deliberately misinterpreted the treaties** and says it has legal grounds to defend itself including a **long-standing threat of war** if Greece extended its territorial waters.

○ Greek-Turkish differences are **not presently about land, but water.**

● They **currently each have six nautical miles (11km) of territorial water** in the Aegean.

● The **UN Convention on the International Law of the Sea (UNCLOS)**, concluded in 1982 and ratified by 158 countries, says states may claim up to 12 miles (about 20km).

➤ **Related Treaty:**

○ Greece absorbed the islands of Limnos, Samothrace, Lesvos, Samos, Chios and Ikaria from the **Ottoman Empire** in the Balkan Wars of 1912-13.

● It was officially awarded sovereignty over them in the Treaty of Lausanne of 1923.

○ Another treaty **drawn up in London in 1914** had made Greek possession of the islands conditional on their demilitarisation.

● According to Turkey, the **Lausanne Treaty** makes reference to the 1914 treaty, it implies the same conditionality.

○ Greece rejects that interpretation.

## *What are the Key Highlights about the Aegean Sea?*

➤ Aegean Sea an arm of the Mediterranean Sea, located between the **Greek peninsula on the west and Asia Minor on the east.**

➤ The Aegean is connected through the **straits of the Dardanelles, the Sea of Marmara, and the Bosporus to the Black Sea,** while the **island of Crete** can be taken as marking its boundary on the south.



■■■

# Social Issues

## Highlights

- Tackling Global Water Scarcity
- World Elder Abuse Awareness Day
- 2021 Report on International Religious Freedom
- Thailand Makes Marijuana Legal
- UN-Habitat Plan For Jaipur

## Tackling Global Water Scarcity

### Why in News?

According to a newly published book, **unconventional water sources** can help beat **global water scarcity.**

➢ The book was compiled by experts at the United Nations University's Institute for Water, Environment and Health (UNU-INWEH), UNU Institute for Integrated Management of Material Fluxes and of Resources and the UN **Food and Agriculture Organisation.**

➢ **Conventional water sources which rely on snowfall, rainfall and rivers** – are not enough to meet growing freshwater demand in water-scarce areas.

| What are Unconventional water sources? | |
|---|---|
| **Enhancing Rain via Cloud-Seeding** | ➢ Global research on cloud-seeding technology indicates that **precipitation can be increased up to 15% of the annual norm**, depending on the available cloud resources and technical systems used. <br> ➢ However, it was **acknowledged that greater research was needed** on the variability of the technology in different areas. |
| **Fog Harvesting and Micro-Catchment Rainwater Harvesting** | ➢ **Efficient fog harvesting systems** wherein **moisture in fog is collected through rocks, flora or mesh nets** can yield within 20 litres per square metre per day, for a decade. Only 70 sites have shown to be viable for fog harvesting. |
| | ➢ Micro-catchments have also **shown potential for households** or farmlands in dry environments with low rainfall. |
| **Role of Icebergs** | ➢ **Icebergs**, the world's largest source for freshwater, have also been gaining attention in recent years. <br> ➢ **Climate change** is causing polar ice caps to melt and break, and scientists, scholars, and leaders have discussed "towing" polar ice caps to countries with water shortages. <br> ➢ In 2017, faced with massive water shortages, the **United Arab Emirates proposed a plan to tow an iceberg into the country**, but no action was taken on this front. |
| **Ballast Water** | ➢ Ballast water is **another transportable resource** - freshwater or saltwater held in the ballast tanks and cargo holds of ships to provide stability and maneuverability during a journey. <br> ➢ Around 10 billion tonnes of ballast water is discharged globally every year in accordance with **international norms**, this water needs to be desalinated. |

Note:

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| | |
|---|---|
| | ➤ When **desalination is used to treat ballast water,** the end product (desalinated water) is free of invasive aquatic organisms and unhealthy chemical compounds, making it usable for public water supply and irrigation as well. |
| **Municipal Wastewater** | ➤ Proper treatment of municipal wastewater — already underway in several countries is a major resource of water for agriculture.<br><br>➤ Several countries have **launched successful initiatives to treat wastewater to meet demand.** |
| **Drainage Water** | ➤ Drainage water used in irrigation agriculture also has potential for reuse, but is hindered due to its high salinity.<br><br>➤ Careful management and promotion of salt-resistant crops can be the solutions for this. |
| **Brackish Water** | ➤ Research has shown that **continental shelves have around 5 million cubic km brackish water** and 300,000-500,000 cubic km freshwater within their sedimentary deposits.<br><br>➤ Development of brackish water resources is already underway in countries in West Asia, Africa, Europe and the US and India. |

## *What is the Current State of Water Scarcity?*

➤ **World:**
  ○ **Only 3% of the world's water is freshwater,** and two-thirds of that is tucked away in frozen glaciers or otherwise unavailable for our use.
  ○ As many as **87 countries are projected to become water-scarce by 2050.**
  ○ One in four people on Earth face shortages of water for drinking, sanitation, agriculture and economic development.

● Water scarcity is expected to intensify in regions like the Middle East and North Africa region, which has 6% of the global population but only 1% of the world's freshwater resources.

➤ **India:**
  ○ **About:**
    ● Although India has **16% of the world's population,** the country possesses only 4% of the world's freshwater resources.
    ● In recent times, the **water crisis in India has become very critical,** affecting millions of people across India.
    ● As many as **256 of 700 districts in India have reported 'critical' or 'overexploited'** groundwater levels **according to the most recent Central Ground Water Board data (from 2017).**
    ● **Three-fourths of India's rural families lack access to piped, drinkable water** and must rely on unsafe sources.
    ● India has **become the world's largest extractor of groundwater,** accounting for 25% of the total. Some **70% of our water sources** are contaminated and our major rivers are dying because of pollution.
  ○ **Related Initiatives:**
    ● **Jal Kranti Abhiyan**
    ● **National Water Mission**
    ● **National Rural Drinking Water Programme**
    ● **NITI Aayog Composite Water Management Index**
    ● **Jal Jeevan Mission**
    ● **Jal Shakti Abhiyan**
    ● **Atal Bhujal Yojana**

## *What are the Recommendations?*

➤ Unconventional water resources can provide major relief, provided the following strategies are followed:
  ○ **Promoting further research and practice** on both technical and nontechnical aspects of unconventional water resources.
  ○ **Ensuring that unconventional waters provide benefit**s, not cost to the environment.
  ○ Positioning unconventional waters as a reliable source of water in times of uncertainty.
  ○ Supporting complementary and multidimensional approaches such as addressing water scarcity and climate change together.

# World Elder Abuse Awareness Day

## Why in News?

➤ On the eve of **World Elder Abuse Awareness Day (WEAAD – 15th June)**, the Social Justice and Empowerment Ministry has released a report on the state of Elderly People in India.

➤ The report was **based on a survey conducted by a Non-Governmental Organisation** across 22 cities.

### What is Elder Abuse?

➤ Elder abuse can be **defined as "a single, or repeated act, or lack of appropriate action,** occurring within any relationship where there is an expectation of trust which causes harm or distress to an older person".

➤ It is a **global social issue which affects the Health and Human Rights of millions of older persons** around the world, and an issue which deserves the attention of the international community.

➤ **Elder abuse is a problem that exists in both developing and developed countries** yet is typically underreported globally.

   ❍ Prevalence rates or estimates exist **only in selected developed countries** — ranging from 1% to 10%.

   ❍ As such, it demands a global multifaceted response, one which focuses on protecting the rights of older persons.

## What are the Key Highlights about the WEAAD?

➤ **About:**
   ❍ WEAAD occurs every year on **15th June.**
   ❍ It was officially recognized by the **United Nations General Assembly** in its **resolution 66/127** in 2011.

➤ **Theme for 2022:**
   ❍ Digital Equity for All Ages.

➤ **Aim:**
   ❍ **To raise awareness about the plight of elderly people** who are abused and harmed.
      ● The **primary goal is to develop a better understanding of elder abuse** and neglect by raising awareness about the cultural, social, economic, and demographic factors that influence such abuse and neglect.

## What are the Key Highlights of the Report?

➤ **Economic Conditions:**
   ❍ India has shown that **47% of elderly people are economically dependent** on their families for income and 34% relied on pensions and cash transfers, while 40% of the surveyed people have expressed a desire to work "as long as possible".

➤ **Citizens willing to Work:**
   ❍ **71% of senior citizens were not working,** while 36% were willing to work and 40% wanted to work "as long as possible".
      ● As much as **30% of the elders were willing to volunteer their time** for various social causes.

➤ **Healthcare Facilities:**
   ❍ **87% elders reported there is availability of healthcare facilities** nearby, however 78% elders mentioned unavailability of app-based online healthcare facilities and a significant 67% elderly reported they do not have any health insurance at this critical stage in their lives and only 13% are covered under government insurance schemes.

➤ **Elder Abuse:**
   ❍ **59% of elders felt that elder abuse was "prevalent" in society**, but 10% reported being victims themselves.

## What are the Related Initiatives?

➤ **Integrated Programme for Older Persons (IPOP)**
➤ **Rashtriya Vayoshri Yojana (RVY)**
➤ **Pradhan Mantri Vaya Vandana Yojana (PMVVY)**
➤ **Vayoshreshtha Samman**
➤ **Maintenance and Welfare of Parents and Senior Citizens (MWPSC) Act, 2007**
➤ **Elder Line, the first Pan-India toll-free helpline number (14567)**
➤ **SAGE (Seniorcare Aging Growth Engine) initiative**

## Way Forward

➤ There is a **need to pay greater attention to the social security of senior citizens** in the country.

➤ The **Centre must come up with a comprehensive preventive package**, which provides awareness regarding common geriatric problems with a focus on nutrition, exercise, and the promotion of mental well-being.

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# 2021 Report on International Religious Freedom

## *Why in News?*

Recently, the 2021 Report on **International Religious Freedom (IRF)** was released by the US Department of State.

➢ The document is distinct from the IRF report released by the **US Commission on International Religious Freedom (USCIRF).**

➢ USCIRF is an **independent, bipartisan federal government entity** while the IRF is part of the US State Department. The former's report holds a statutory obligation.

## *What is the US Office of International Religious Freedom?*

➢ **History:**
- ○ In 1998, the then-US President Bill Clinton **signed the International Religious Freedom Act (IRFA, 1998) into law.**
- ○ The Act led to the creation of the Office of International Religious Freedom headed by an Ambassador-at-Large within the State Department of the US government, and the establishment of a **US Commission on International Religious Freedom (USCIRF).**

➢ **Purpose:**
- ○ The US Office of International Religious Freedom (IRF) monitors **religiously motivated abuses, harassment, and discrimination globally.**
- ○ Additionally, it **recommends, develops and implements policies** and programs to address the mentioned concerns.
- ○ The IRF also mentions that it a**ssists emerging democracies globally to implement freedom of religion and conscience.**
- ○ Further, **identify and denounce regimes** that persecute on the basis of religion and assist NGOs globally in promoting religious freedom.

## *What are the Key Highlights of the Report?*

➢ **India:**
- ○ **Rising Attacks:**

- India has seen an **increase in attacks on people** (due to religious intolerance) and places of worship.
- Attacks on members of religious minority communities, including killings, assaults, and intimidation, occurred throughout the year.
  - These included incidents of 'cow vigilantism' against non-Hindus based on allegations of cow slaughter or trade in beef.

○ **Anti-Conversion laws:**
- The India segment also **highlights anti-conversion laws in the country,** noting that **28 states have these laws** and arrests were made under them.
- It also notes that **several State governments announced plans to introduce anti-conversion laws.**

○ **Arrests by Police:**
- Police arrested **non-Hindus for making comments in the media** or on social media that were considered offensive to Hindus or Hinduism.

○ **Suspected Terrorists Targeted:**
- There have been attacks in Jammu and Kashmir targeting and killing civilians and migrants, including Hindu migrant workers from Bihar.
- As per reports, **this caused extensive fear in the Hindu and Sikh communities**, leading to an exodus of migrants from the area.

○ **Lynching:**
- Incidents of lynching of Muslims in Tripura, Rajasthan, and Jammu and Kashmir in 2021 are also mentioned.

○ **Foreign Contributions Regulations Act:**
- **Foreign Contributions Regulations Act** was used by the government to constrain the functioning of **Non-Governmental Organisations (NGOs).**
  - The government claims that the Act is used to strengthen oversight and accountability of foreign NGOs.

➢ **World:**
○ **About:**
- **Vietnam and Nigeria have been cited as countries** where religious expression was being curtailed.

Note:

- **Another set of examples of countries with religious freedom restrictions** cited include US ally Saudi Arabia, as well as China, Pakistan and Afghanistan.
- China continues its genocide and repression of predominantly **Muslim Uyghurs** and other religious minority groups.
- In Pakistan, many persons have been accused of **blasphemy,** or sentenced to death by courts in 2021.
  - **Progress Made:**
    - **Morocco, Timor Leste, Taiwan and Iraq** as examples of countries where progress had been made on religious freedom.
- Some countries were not respecting the **"basic rights" of citizens -** including by using apostasy and blasphemy laws and curtailing religious expression - such as by restricting religious attire.

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**What is the State of Freedom of Religion in India?**

- Freedom of religion in India is a **fundamental right guaranteed by Article 25-28** of the Constitution of India.
  - **Article 25** (Freedom of conscience and free profession, practice and propagation of religion).
  - **Article 26** (Freedom to manage religious affairs).
  - **Article 27** (Freedom as to payment of taxes for promotion of any religion).
  - **Article 28** (Freedom as to attendance at religious instruction or religious worship in certain educational institutions).
- Further, **Article 29 and 30 of the Constitution** deal with the protection of interests of minorities.

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# Thailand Makes Marijuana Legal

### Why in News?

Recently, Thailand has legalized cultivating and possessing Marijuana but recreational use (Such as smoking) is still banned, even though advocates say the **easing effectively decriminalises Marijuana.**

- The nation is the first to advance such a move in **South-East Asia**, a region known for its stringent drug laws.

### What are the Key Highlights?

- The goal is to get a head start on its neighbours in winning a large slice of the **lucrative market for health treatments using cannabis derivatives**, in particular the milder compound CBD (Cannabidiol). But there is another motive; **to reducing overcrowding in some of the world's most overcrowded jails.**
- The government is hoping that **developing a local cannabis trade will boost agriculture and tourism.**

### What is Marijuana?

- **About:**
  - Marijuana is a **psychoactive drug from the Cannabis plant** used for medical, recreational & religious purposes.
    - Cannabis can be used for **smoking, vaporization, within food, or as an extract.**
  - It creates **mental and physical effects, such as a "high" or "stoned" feeling**, a general change in perception, and an increase in appetite.
  - Short term side effects **may include a decrease in short-term memory**, dry mouth, impaired motor skills, red eyes, and feelings of paranoia or anxiety.
  - Long term side effects may i**nclude addiction, decreased mental ability and behavioural problems** in children whose mothers' used cannabis during pregnancy.
- **Regulation in India:**
  - Cannabis was regulated by the state excise departments and legally sold till 1985.
  - In 1985 The **Narcotic Drugs and Psychoactive Substances (NDPS) Act** has been enacted central level commercial cultivation of cannabis by production, possession, sale/purchase, transportation, interstate import/export or any other forms is punishable. The Act has been amended three times – in 1988, 2001, and most recently in 2014.
  - While CBD oil manufacturing is licenced under the Drugs and Cosmetics Act, 1940 can be legally used and sold. Some Indian websites do sell. But to purchase it one needs a prescription and many even facilitate it.
  - Similarly, Bhang, ganja and charas are enlisted in the Drugs and Cosmetics Rules, 1945 for use in Ayurveda, Siddha and Unani.

## *What are the Facets of Marijuana Legalisation and Criminalisation?*

➤ **Legalization:**

○ **Curb crime:**

- Evidence suggests that **strict enforcement of the narcotics law based on prohibition tends to target the most defenceless members** along the **drug smuggling chain.**

- Prohibition **strengthens the cartels** they should be targeting. The big cartels and traffickers remain out of reach of the regular law enforcement machinery.

- **Filling jails with drug users and street-level suppliers only stresses** the criminal justice system.

○ **Cultural and Historical Significance:**

- The documented use of cannabis in India dates back to the **Vedic period**. In the Atharva-veda, the 'bhang' plant finds a notable mention as one of nature's five sacred, distress-relieving plants. During the festival of Holi, the consumption of bhang is an integral part of the celebrations even today.

- Indian Hemp Drugs Commission in 1894 found consumption of cannabis in colonial India extensive and determined that its use was very ancient, had some religious sanction, and was harmless in moderation.

- The commission recommended against complete ban on its consumption as it can push consumer towards other hard drugs.

- Until 1985, when NDPS Act was enacted, cannabis derivatives — bhang, charas and ganja — were regulated by the various state excise departments and legally sold by licensed shops.

○ **Less Health Risk when compared to Alcohol:**

- **WHO (World Health Organization)** study concluded that the public health risks from cannabis use were likely less severe than those posed by alcohol and tobacco, which are legal.

○ **Business and Economic Possibilities:**

- The legal marijuana market is currently worth more than USD 7 billion globally and is expected to hit USD 31 billion by 2021.

- The fabric produced from hemp is of very high quality. Hemp is also highly suitable as a technical fibre. India also has many startups working in this field like The Mumbai-based The Bombay Hemp Co. (BOHECO).

➤ **Criminalization:**

○ **Marijuana Causes Psychosis:**

- Marijuana can trigger mental health related issues in its users. THC (tetrahydrocannabinol) in marijuana has been proved to cause psychosis.

- Those who use it as adolescents or younger may be more likely to develop mental health problems later in life. In some cases, it can also make people feel nauseous, lethargic, forgetful, anxious, or confused.

○ **Marijuana is a gateway drug:**

- Cannabis has been engineered to become much more as an addictive. Growers has decreased level of CBD and increased level of THC.

- A vulnerable person who will abuse it as a gateway drug before moving to more dangerous substances. In a study it was found that 45% who used marijuana also used other 'Hard' drugs.

○ **Marijuana damages organs:**

- WHO has listed a number of diseases associated with the consumption of marijuana, including impairment in cognitive functioning, airway injury, bronchitis and lung inflammation.

○ **Regulations difficult to enforce:**

- If marijuana will be available at a pharmacy with a prescription (like in the US) how government will ensure that it's not bought for recreational purpose. Considering, cough syrups and inhalants are freely accessible and brought incessantly by addicts.

# UN-Habitat Plan For Jaipur

## *Why in News?*

Recently, the **UN-Habitat** has identified issues associated with **Jaipur city** like multi hazard vulnerabilities, weak mobility and **Green-Blue economy** and has laid out a plan to increase sustainability in the city.

- The urban problems which persist in Jaipur are the same for other cities.
- UN-Habitat has based its findings on **sustainable cities integrated approach pilot project** and a "sustainable urban planning and management" component was implemented in partnership with the Jaipur Development Authority and Jaipur Greater Municipal Corporation.
  - The project has received funding from the **Global Environment Facility (GEF-6)** to estimate the carbon sequestration potential of Indian cities.

### What is the Findings of the Project?

- Jaipur got an overall sustainability rating of three on the **Urban Sustainability Assessment Framework (USAF)** based on the information collected for 87 of its 131 parameters.
  - The Urban Sustainability Assessment Framework (USAF) developed under the **Sustainable Cities Integrated Approach Pilot (SCIAP) project, implemented by United Nations Industrial Development Organization (UNIDO) and UN-Habitat**.
- The UN-Habitat highlighted the following problems which are faced by the city:
  - Weak access to a public transportation system, with less number of buses and poor route delineation.
  - Extreme levels of **drought** during summer and also **urban floods.**
  - Lack green cover which has resulted in the **urban heat island** effect that has disrupted biodiversity.

### What are the Recommendations of UN-Habitat?

- Experts recommended measures that **increase the green cover, strengthen urban biodiversity**, and thereby enhance the quality of life for citizens.
- To **address the challenges of urban sprawling**, the UN-Habitat emphasised the idea of a compact city with re-development and re-densification of the existing urban areas.
  - Experts also recommended that linking the distance from the main city to the development charges imposed on citizens could be considered as an indirect measure to curb development on the city's outskirts.

- To **improve the situation of public transportation**, fare integration for different modes of transport and enhancing the non-motorised transport infrastructure would make movement convenient and reduce traffic and vehicle emissions.
- The 800 dry wells in Jaipur's Walled City could be used for **rainwater harvesting and raising the water table**, mitigating urban floods and ensuring efficient utilisation of water resources.
- **Eco-trails with plantations** along natural drainage channels and railway tracks are recommended in the city.
- Experts from the **Tourism & Wildlife Society of India (TWSI)** said that the urban development authorities should **measure oxygen produced and carbon dioxide released each day** in each urban complex and plan the green cover accordingly and also select the species of plants with utmost caution since only indigenous, broad-leaved and tap-root trees produce more shade and oxygen.

### What is the UN-Habitat?

- The **United Nations Human Settlements Programme** is the United Nations programme for human settlements and sustainable urban development.
- It was established in 1978 as an outcome of the **First UN Conference on Human Settlements and Sustainable Urban Development (Habitat I)** held in Vancouver, Canada, in 1976.
- UN-Habitat maintains its **headquarters at the United Nations Office at Nairobi, Kenya**.
- It is mandated by the **United Nations General Assembly** to promote socially and environmentally sustainable towns and cities with the goal of providing adequate shelter for all.
- It is a member of the **United Nations Development Group**. The mandate of UN-Habitat derives from the Habitat Agenda, adopted by the United Nations Conference on Human Settlements (Habitat II) in Istanbul, Turkey, in 1996.
- The t**win goals** of the Habitat Agenda are:
  - **Adequate shelter for all**
  - The development of **sustainable human settlements** in an urbanizing world

Note:

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**What is Global Environmental Facility (GEF)?**

➢ It is an independently operating financial organization.

➢ GEF is a multilateral financial mechanism that provides grants to developing countries for projects that benefit the global environment and promote sustainable livelihoods in local communities.

➢ It was set up as a **fund** under **World Bank in 1991**

➢ In 1992, at the Rio Earth Summit, the GEF was restructured and **moved out of the World Bank** system to become a permanent, separate institution.

➢ Since 1994, however, the World Bank has served as the Trustee of the GEF Trust Fund and provided administrative services.

➢ It is based in **Washington DC**, United States.

➢ It **addresses six designated focal areas**:

   ○ Biodiversity,
   ○ Climate change,
   ○ International waters,
   ○ Ozone depletion,
   ○ Land degradation and
   ○ Persistent Organic Pollutants.

➢ The program supports an active portfolio of over 200 investments globally.

➢ GEF serves as a financial mechanism for:

   ○ Convention on Biological Diversity (CBD)
   ○ United Nations Framework Convention on Climate Change (UNFCCC)
   ○ UN Convention to Combat Desertification (UNCCD)
   ○ Stockholm Convention on Persistent Organic Pollutants (POPs)
   ○ Minamata Convention on Mercury

➢ India is both **donor and recipient** of GEF.
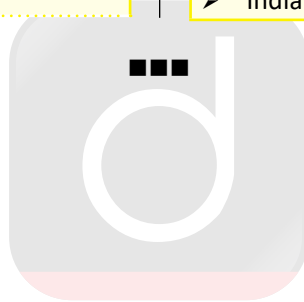
Note:

# Science & Technology

## Highlights

- *China's Tiangong Space Station*
- *India's first Biotech Startup Expo 2022*
- *PD1 Therapy for Cancer*
- *India's First Liquid Mirror Telescope*
- *Bharat Drone Mahotsav 2022*
- *Transfer of in-orbit Communication to NewSpace India Ltd (NSIL)*
- *Language Model for Dialogue Applications*
- *West Nile Virus*
- *Artificial Light to Fight Against Malaria*

## China's Tiangong Space Station

### Why in News?

➢ **Recently, China's strategically significant space station project** entered the final phase as **three astronauts** entered the orbiting module of the Tiangong Space Station.

  ❍ They were launched into the designated orbit by the **Shenzhou-14 spacecraft**.

  - **Shenzhou-1 to 4** space flights were unmanned spaceflight missions.

  - **Shenzhou-5 to 14** spaceflights are manned spaceflight missions.

  ❍ A **space station** is a **spacecraft capable** of supporting **crew members**, designed to remain in space for an extended period of time and for other **spacecraft to dock.**

### What is the Tiangong Space Station?

➢ **The Tiangong space station** is a Chinese space station being built in **low Earth orbit** between **340 and 450 kilometers above the earth.**

  ❍ It is part of **China Manned Space Program** and is the country's **first long-term space station.**

➢ China is going to operationalize its new **Tiangong multi-module space station** for at least ten years.

➢ **China launched an unmanned module** named **"Tianhe", or "Harmony of the Heavens"** for its permanent space station in 2021 that it plans to complete by the end of **2022.**

➢ **Tianhe core module** is the **first module** to launch the **Tiangong space station module.**



China's space station
How it will look when fully assembled

Shenzhou
Crew capsule / 'lifeboat'

Wentian
Science lab

Mengtian
Science lab

Tianzhou
Robotic cargo ship

Tianhe
Core module including main living area

Note:

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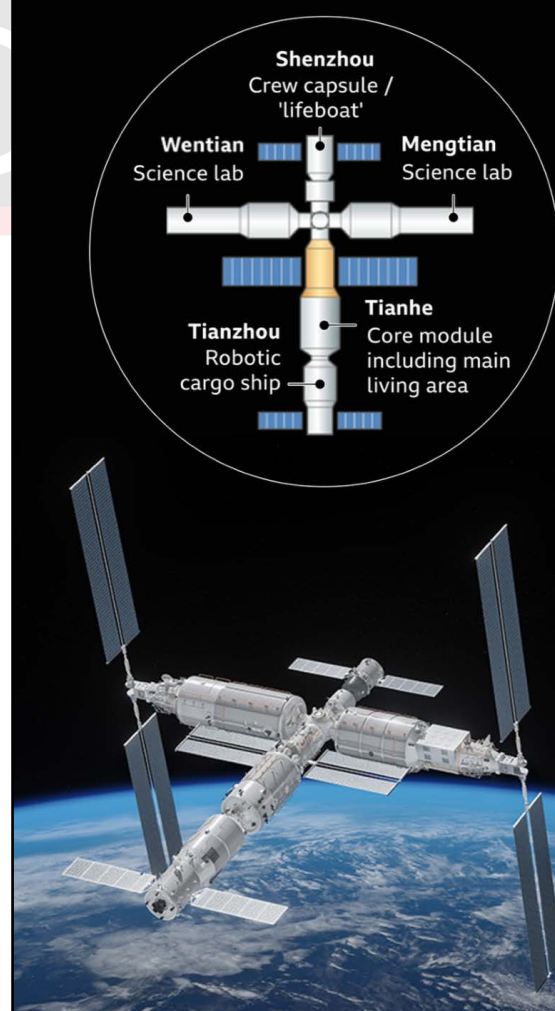
### What is the China Manned Space Programme?

➢ The **Chinese government** decided to launch a **human space programme** using a **"three-step" method** in **1992** which is known as the **China Manned Space Program.**

- ❍ **The 1ˢᵗ step:** To launch manned spaceships to master basic human space technologies.
- ❍ **The 2ⁿᵈ step:** To launch Space Labs to make technological breakthrough in R&D, and accommodation of long-term man-tended utilization on a modest scale
- ❍ **The 3ʳᵈ step:** To construct China's Space Station to accommodate long-term man-tended utilization on a large scale

➢ It is **managed** by the **China Manned Space Agency.**

### What is the Importance of this Launch for China?

➢ China is **only the third country** in history to have put both astronauts into space and to **build a space station**, after the Russia and the US.

➢ The **China Space Station (CSS)** is also expected to be a competitor to the **International Space Stations.**

- ❍ The **International Space Station (ISS)** Is a collaborative project of several countries.
- ❍ The ISS is the most complex international scientific and engineering project in history and the largest structure humans have ever put into space.

### What are India's Space Station Programmes?

➢ **About:**

- ❍ India is planning to **launch its own space station by 2030,** joining the league of US, Russia, and China to an elite space club.
- ❍ The Indian space station will be much smaller **(mass of 20 tonnes)** than the International Space Station and will be used for carrying out microgravity experiments (not for space tourism).
- ❍ Preliminary plan for the space station is to accommodate astronauts for up to **20 days** in space, and the project will be an **extension of the Gaganyaan mission**.
- ❍ It will orbit Earth at an **altitude of around 400km**.
- ❍ **ISRO (Indian Space Research Organization)** is working on a space docking experiment (Spandex), a technology that is crucial for making the space station functional.

- • Space docking is a technology that allows transferring humans from one spacecraft to another.

➢ **Significance:**

- ❍ Space stations are **essential for collecting meaningful scientific data**, especially for biological experiments.
- ❍ Provide platforms for greater number and length of scientific studies than available on other space vehicles. (as **Gaganyaan** will take humans and experiments in microgravity for a few days only).
- ❍ Space stations are used to study the effects of long-term space flight on the human body.

# India's first Biotech Startup Expo 2022

### Why in News?

Recently, Prime Minister has inaugurated the **Biotech Startup Expo - 2022**.

➢ It is a **reflection of the expansive growth of the biotech sector** in the country.

### What are the Key Highlights of the Expo?

➢ **About:**

- ❍ The Biotech Startup Expo 2022 will provide **a common platform to connect investors, entrepreneurs, scientists, researchers, industry leaders, manufacturers, bio-incubators, regulators and government officials.**
- ❍ The expo is being organised by the Department of **Biotechnology and Biotechnology Industry Research Assistance Council (BIRAC)** to mark the completion of ten years of BIRAC.
- ❍ It will showcase **applications of biotechnology in various fields** including healthcare, agriculture, genomics, clean energy, biopharma, industrial biotechnology and waste-to-value.

➢ **Theme:** 'Biotech Startup Innovations: Towards AatmaNirbhar Bharat'.

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**What is Biotechnology and its Application?**

➢ Biotechnology is **technology that utilizes biological systems**, living organisms or parts of this to develop or create different products.

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Note:

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> ➤ Brewing and baking bread are examples of processes that fall within the concept of biotechnology (use of yeast (= living organism) to produce the desired product).
> - ❍ Such traditional processes usually utilize the living organisms in their natural form (or further developed by breeding), while the more modern form of biotechnology will generally involve a more advanced modification of the biological system or organism.
> ➤ Biotechnology deals with **industrial scale production of biopharmaceuticals and biologicals using genetically modified microbes**, fungi, plants and animals.
> ➤ The applications of biotechnology include **therapeutics, diagnostics, genetically modified crops for agriculture, processed food, bioremediation, waste treatment, and energy production.**

### *What is the Status of Biotech Sector?*

➤ **About:**
- ❍ India is among the **top 12 destinations for biotechnology globally and 3rd largest biotechnology destination** in the Asia Pacific region.
- ❍ The country is a**lso the world's third-largest producer of recombinant Hepatitis B vaccine** and second-largest producer of **BT cotton** (genetically modified pest resistant plant cotton).
- ❍ India's Biotech sector is **categorised into Biopharmaceuticals, BioIndustrial, Bioagriculture, BioIT & BioServices.**
- ❍ Within bio-services, I**ndia offers a strong capability in contract manufacturing, research and clinical trials**, and is home to the most US FDA approved plants globally outside of the US.

➤ **Statistics:**
- ❍ The Indian bioeconomy **grew from USD 62.5 billion in 2019 to USD 70.2 billion in 2020** at a growth rate of 12.3%.
- ❍ The Indian biotechnology industry, which stood at USD 63 billion in 2019, is expected to reach USD 150 billion by 2025, with a **CAGR (Compound Annual Growth Rate)** of 16.4%.
  - ● By 2025, the contribution of the Indian biotechnology industry to the global biotechnology market is expected to grow to 19%.

- ❍ As of 2021, **India's biotech industry clocks in about USD 12 billion in annual revenue.**

➤ **Potential of Biotechnology:**
- ❍ **Multi-Faceted Domain:** Biotechnology is a multi-faceted domain encompassing **applications in agriculture, pharmaceuticals, scientific discoveries, etc.** The biotech sector can be broadly divided into five major segments:
  - ● Biopharma
  - ● Bio-agriculture
  - ● Bio-services
  - ● Bio-industrial Applications
  - ● Bioinformatic
- ❍ **Growing Biotech Start-ups:** As one of India's pioneering achievements in biotechnology, the sector employs the best minds and contributes to the development of **generic and affordable medicines.**
  - ● Currently, there are over 2,700 biotech start-ups and are expected to touch the 10,000-mark by 2024.
- ❍ **Role of BIRAC:** Biotechnology Industry Research Assistance Council (BIRAC), established under the Department of Biotechnology in 2012, continues to play a crucial role in the development of the biotech sector in India.
  - ● **BIRAC brings innovators and funders on to a common table**, enabling ideas to become a reality and facilitate technological advances that make human progress possible.
- ❍ **Other Factors:**
  - ● India is seen as **a potential land of opportunity by the biotech sector.**
  - ● These factors include a **diverse population, diverse climates, a talented workforce, initiatives to relax corporate regulations and a growing demand for bio goods.**

➤ **Associated Challenges:**
- ❍ **Structural Issues:** Considering that manufacturing in the biopharma sector is capital intensive, such investments have been suboptimal in India **due to limited access to capital, inadequate infrastructure and complex and ever-evolving regulatory framework.**

Note:

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- As Biotechnology products and solutions **often require ethical and regulatory clearance, making the process long, expensive and cumbersome.**
- Further, **low remuneration of scientists (compared to the developed economies) and a few institutional research bases** have not helped create more jobs in biotechnology.

○ **Heavily Public Sector Dominated:** Compared to the developed economies (the United States), biotechnology research in **India is mainly funded by the public exchequer.**

- Unless the **private sector starts supporting applied research and engages with academic institutions**, the innovation in applied and translational biotechnology will be minimal.

○ **Lack of Innovation:** In terms of innovation, entrepreneurship, and technology creation, **the biotechnology sector requires years of experience in the domain, access to labs with sophisticated instruments, sustained and long-term funding to innovate.**

- However, India has not done well enough in improving innovation culture.

**What are the Related Initiatives?**
➢ **UNATI Atal Jai Anusandhan Mission Programmes.**
➢ **Biotechnology Parks and Incubators.**
➢ **National Biopharma mission**
➢ **'UMMID' initiative**
➢ **Genome India**
➢ **LOTUS HR project**
➢ **Biotech-KISAN**

# PD1 Therapy for Cancer

## *Why in News?*

In a medical trial in the USA, 12 patients were **completely cured of rectal cancer without requiring any surgery or chemotherapy**.

➢ The trial used a **monoclonal antibody dostarlimab** every three weeks for six months for the treatment of a particular kind of **stage two or three rectal cancer**.

➢ The study was done by doctors from the Memorial Sloan Kettering Cancer Centre in New York.

## *What are Findings of the trial?*

➢ The trial showed that **immunotherapy** alone – without any **chemotherapy, radiotherapy,** or surgery that have been staples of cancer treatment – could completely cure the patients with a particular kind of rectal cancer called **'mismatch repair deficient' cancer.**

○ 'Mismatch repair deficient' cancer is **most common** among colorectal, gastrointestinal, and endometrial cancers. Patients suffering from this condition **lack the genes to correct typos in the DNA** that occur naturally while cells make copies.

○ Immunotherapy is a treatment that uses a person's own immune system to fight cancer. Immunotherapy can boost or change how the immune system works so it can find and attack cancer cells.

➢ Immunotherapy **belongs to a category called PD1 blockades** that are now recommended for the treatment of such cancers rather than chemotherapy or radiotherapy.

## *What is PD1 Therapy?*

➢ **PD1** is a **type of protein** that regulates certain functions of the immune system, including by **suppressing T cell activity**, and PD1 blockade therapy looks to release the **T cells** from this suppression.

○ T-cells are the White Blood cells (WBCs). They are critical for developing immunity towards common pathogens or antigens.

➢ Earlier, this therapy was used post-surgery, but the study has shown that **surgery may not be required.**

➢ Although the therapy is usually used for cancers that have **metastasised** (spread to locations other than where the cancer formed), it is now **recommended for all mismatch repair deficient cancers** as they result in quicker improvement and lesser toxicity as compared to traditional chemo and radiotherapy.

➢ Eliminating other treatments can **improve a patient's quality of life** by preserving fertility, sexual health, and bladder and bowel functions.

## *When can such a treatment be accessible in India?*

➢ The problem with immunotherapies is that they are **expensive and unaffordable** for most people in India. An immunotherapy treatment can cost around Rs 4 lakh per month, with patients needing the treatment for six months to a year."People may end up using their life-savings for the treatment.

Note:

➢ **Precision medicine**, such as using particular immunotherapy drugs for particular types of cancers, is **still at a nascent stage in India.**

  ❍ **Precision medicine** is an emerging approach for disease treatment and prevention that **takes into account individual variability** in genes, environment, and lifestyle for each person." This approach will allow doctors and researchers to predict more accurately which treatment and prevention strategies for a particular disease will work in which groups of people.

# India's First Liquid Mirror Telescope

## Why in News?

Recently, **Devasthal Observatory campus** owned by **Aryabhatta Research Institute of Observational Sciences (ARIES)**, Nainital in Uttarakhand has set-up the **International Liquid-Mirror Telescope (ILMT).**

## What are the Key Highlights about ILMT?

➢ It has become the **world's first Liquid-Mirror Telescope (LMT) to be commissioned for astronomy** and also one of its kind to be operational anywhere in the world.

➢ **Asteroids, supernovae, space debris and all other celestial objects** will be observed using ILMT from an altitude of **2,450 metres in the Himalayas.**

➢ Previously built telescopes either tracked **satellites** or were deployed for military purposes.

➢ ILMT will be the **third telescope facility to come up at Devasthal.**

  ❍ Devasthal is **one of the world's original sites** for obtaining astronomical observations.

  ❍ **Devasthal Optical Telescope (DOT)** and **Devasthal Fast Optical Telescope (DFOT)** are the other two telescope facilities at Devasthal.

➢ In **October 2022, full-scale scientific operations** of ILMT will be started.

➢ It will be working along with **India's largest operating Devasthal Optical Telescope (DOT).**

➢ The countries involved in ILMT's development are **India, Belgium, Canada, Poland and Uzbekistan.**

## How is LMT Different from Conventional Telescope?

➢ A LMT is a **stationary** telescope whereas a conventional telescope **moves along the direction of the object** of interest in the sky.

➢ A LMT will survey and capture **any and all possible celestial objects** such as stars, galaxies, supernovae explosions, asteroids and even space debris. However, a conventional captures **just a piece of sky at a given point of time.**

➢ LMT comprises mirrors with a **reflective liquid (ILMT has mercury as reflective liquid)**. On the other hand, a conventional telescope uses **highly-polished glass mirrors.**

➢ While ILMT will be capturing **images of the sky on all nights, c**onventional telescopes observe specific objects in the sky for fixed hours only.

## What is the Significance of ILMT?

➢ **Enormous amount of data** (10-15 GB/night) will be generated. This will be significant for the global scientific communities.

➢ Latest computational tools, like **Artificial Intelligence, Machine Learning and big data analytics** will be deployed for screening, processing and analyzing the data.

➢ Selected data can be used as a base data for carrying out **further focused research using spectrographs, near-Infrared spectrograph mounted on the in-house DOT.**

# Bharat Drone Mahotsav 2022

## Why in News?

Recently, India's biggest Drone Festival - **Bharat Drone Mahotsav 2022** was inaugurated in **New Delhi** by the Prime Minister.

➢ **A virtual award of drone pilot certificates, panel discussions, product launches, display of a 'Made in India' Drone Taxi prototype, flying demonstrations, among others** were the key events.

## What are Drones?

➢ **Drone** is a layman terminology for **Unmanned Aircraft (UA).**

Note:

➤ Originally developed for the military and aerospace industries, drones have found their way into the mainstream because of the enhanced levels of safety and efficiency they bring.

➤ A drone's autonomy level can range from remotely piloted (a human controls its movements) to advanced autonomy, which means that it relies on a system of sensors and **LIDAR detectors** to calculate its movement.

## *What are the Applications of Drone Technology?*

➤ **Agriculture:** In the agriculture sector, micronutrients can be spread with the help of drones.

  ❍ It can also be used for performing surveys for identifying the challenges faced by the farmers.

➤ **Defence:** Drone system can be used as a symmetric weapon against terrorist attacks.

  ❍ Drones can be integrated into the national airspace system.

  ❍ Deployment of drones for combat, communication in remote areas, counter-drone solutions can be done.

➤ **Healthcare Delivery Purposes: Indian Council of Medical Research (ICMR)** devised **Drone-Based Vaccine Delivery Model, i-drone. Telangana and North-east states have been approved to use this drone technology for delivering vaccines** in remote areas.

➤ **Monitoring:** The drone technology in the **SVAMITVA scheme** launched by the Government of India, within less than a year, has helped about half a million village residents to get their property cards by mapping out the densely-populated areas.

  ❍ Drones can be used for **real-time surveillance** of assets and transmission lines, theft prevention, visual inspection/maintenance, construction planning and management, etc

  ❍ They can be used for **anti-poaching actions, monitoring of forests and wildlife, pollution assessment, and evidence gathering.**

➤ **Law Enforcement:** Drones are also significant for the law enforcement agencies, the fire and emergency services wherever human intervention is not safe and the healthcare services.

## *What is the significance of Drone Mahotsav?*

➤ Promotion of drone technology is **another medium of advancing our commitment to good governance and ease of living.**

➤ We have got a **smart tool in the form of drones that is going to be part and parcel of common people's lives.**

➤ As drone technology has its application in diverse areas such as defence, **disaster management**, agriculture, healthcare, tourism, film and entertainment, there is a **great possibility of a major revolution creating immense opportunities for employment.**

➤ Villages are witnessing the arrival of roads, electricity, optical fibre and digital technology. However, agriculture work is still being conducted in old ways, leading to hassles, low productivity and wastage.

  ❍ Drone technology is going to play a major role in empowering farmers and modernize their lives.

➤ Government is making efforts towards **creating a strong drone manufacturing ecosystem in India through schemes like Production-Linked Incentive (PLI)**.

**What are the Drone Rules, 2021?**

➤ In 2021, the Ministry notified **liberalized drone rules with the aim to encourage R&D and to make India a drone hub.**

  ❍ It abolished several permissions and approvals. The number of forms that need to be filled was reduced from 25 to five and the types of fee brought down from 72 to 4.

  ❍ No permission is required for operating drones in green zones and no remote pilot license is necessary for non-commercial use of micro and nano drones.

  ❍ Payloads up to 500kg have been allowed so the drones can be used as unmanned flying taxis.

  ❍ Further, foreign ownership of companies operating drones has also been permitted.

**What is the PLI Scheme for Drones?**

➤ The government **also approved a Production-Linked Incentive (PLI) scheme for Drones** and their components with an allocation of Rs. 120 crore for three financial years.

➤ The PLI Scheme for the drones and drone components industry addresses the strategic, tactical, and operational uses of this revolutionary technology.

**What is the Drone Shakti Scheme?**

➤ The Union Budget **pushed for promotion of drones through startups and skilling at Industrial Training Institutes (ITIs).**

Note:

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➢ Startups will be promoted to facilitate 'Drone Shakti' through varied applications and for Drone-As-A-Service (DrAAS). Courses for skilling will also be started in selected ITIs across all States.

  ○ DrAAS allows enterprises to avail various services from drone companies, removing the need for them to invest in drone hardware or software, pilots, and training programmes.

  ○ Sectors where drones can be employed are endless. These include photography, agriculture, mining, telecom, insurance, telecom, oil & gas, construction, transport, disaster management, geo-spatial mapping, forest and wildlife, defence and law enforcement to name a few.

➢ Drones will also be promoted for crop assessment, digitisation of land records, spraying of insecticides and nutrients (Kisan Drones).

➢ The drone services industry is expected to grow to over Rs 30,000 crore in next three years and generate over five lakh jobs.

# Transfer of in-orbit Communication to NewSpace India Ltd (NSIL)

### Why in News?

Recently, the government has approved the transfer of 10 in-orbit communication satellites from the Government of India to NewSpace India Ltd (NSIL).

➢ The entire GSAT series, except GSAT-7 and 7A, will go to NSIL, and thereby to companies intending to develop downstream satcom businesses. The new CMS (communication satellite) series is already operated by NSIL

### What is the Significance of this Step?

➢ Provide Desired Financial Autonomy:

  ○ Transfer of these assets to NSIL will further provide the desired financial autonomy to the company to realize capital intensive programmes/projects and thereby offering huge employment potential and technology spin-off to other sectors of the economy.

➢ Boost Domestic Activity in Space Sector:

  ○ The approval is expected to stimulate domestic economic activity and help India gain a larger share of the global space market.

➢ Facilitate Ease of Doing Business in Space Sector:

  ○ NSIL functioning as a single-window operator will also facilitate the ease of doing business in the space sector.

    ● The NSIL Board will now be empowered to price the transponders as per the market dynamics and global trends in the Satellite Communication sector.

    ● NSIL is also authorised to offer and allocate capacity as per its internal policies and guidelines.

      ■ Under the Space Sector reforms, NSIL was mandated to undertake comprehensive commercial space activities and serve as a full-fledged satellite operator.

**Four Pillars of Space Reforms**

➢ Allowing the private sector freedom of innovation.

➢ Government playing the enabler's role.

  ● Formation of Indian Space Association (ISpA): It aspires to be a collective voice of Indian Sapce Industry.

➢ Preparing youngsters for the future.

  ● Recently, ATL Space Challenge 2021 has been launched. This is to ensure that students of classes 6 to 12 are given an open platform where they can innovate and enable themselves to solve digital age space technology problems.

➢ Treating the space sector as a resource for the progress of the common man.

  ● Development projects are being monitored by satellite imaging, space technology is being used in settlement of Fasal Bima Yojna claims and disaster management planning, and the NAVIC system is helping fishermen.

### What is NewSpace India Ltd (NSIL)?

➢ About:

  ○ NSIL is a Central Public Sector Enterprise of the Government of India.

  ○ It was established in 2019 under the administrative control of the Department of Space.

Note:

- NSIL is the **commercial arm of Indian Space Research Organisation** (ISRO) with the primary **responsibility of enabling Indian industries to take up high technology space related activities.**
- **Headquarters:** Bengaluru
➢ **Mission:**
- **Owning satellites for Earth Observation and Communication applications** and providing space-based services
- **Building satellites and launching** them as per demand
- **Providing Launch Services** for satellite belonging to customer
- **Building launch vehicles through Indian Industry** and launch as per satellite customer requirement
- **Space based Services** related to Earth Observation and Communication satellites on commercial basis
- Satellite building through Indian Industry
- Technology Transfer to Indian Industry

# Language Model for Dialogue Applications

## *Why in News?*

A senior engineer at **Google** claimed that the company's a**rtificial intelligence-based chatbot Language Model for Dialogue Applications (LaMDA) had become "sentient".**

## *What is LaMDA?*

➢ **About:**
- Google had first announced LaMDA at its flagship developer conference I/O (Input/Output) in 2021 as its **generative language model** for the dialogue applications which can assure that the application will be able to converse on any topic.
- **LaMDA can engage in a free-flowing way about a seemingly endless number of topics,** an ability that the company thinks can unlock more natural ways of interacting with technology and the entirely new categories of helpful applications.
- LaMDA can have a discussion on the basis of the user's inputs thanks completely to its language processing model which has been trained on large amounts of dialogue.

➢ **LaMDA 2.O:**
- Google at I/O 2022 announced LaMDA 2.0 which will **further build on these capabilities.**
- The new model **will possibly take an idea and generate imaginative and relevant descriptions, can stay on a particular topic even if a user strays off-topic,** and can also suggest a list of things that are needed for a specified activity.

## *What is the other language-based AI tool capable of?*

➢ **Generative Pre-trained Transformer 3:**
- An **autoregressive language model** that uses deep learning to produce human-like text.
- In 2020, an article was published, claiming that **it was written entirely by an AI text generator known as Generative Pre-Trained Transformer 3 (GPT-3).**

## *What is a Chatbot?*

➢ **About:**
- Chatbots, **also called chatterbots, is a form of Artificial Intelligence (AI)** used in messaging apps.
- This tool **helps add convenience for customers— they are automated programs that interact with customers like a human** would and cost little to nothing to engage with.
  - Key examples are chatbots used by **businesses in Facebook Messenger, or as virtual assistants, such as Amazon's Alexa.**
- Chatbots tend to operate in one of two ways— either via **machine learning or with set guidelines.**
- However, due to advancements in AI technology, chatbots **using set guidelines are becoming a historical footnote.**

➢ **Types:**
- **Chatbot with Set Guidelines:**
  - It can **only respond to a set number of requests and vocabulary** and is only as intelligent **as its programming code.**
  - An example of **a limited bot is an automated banking bot that asks the caller some questions** to understand what the caller wants to do.
- **Machine Learning Chatbot:**
  - A chatbot that **functions through machine learning has an artificial neural network** inspired **by the neural nodes of the human brain.**

- The bot is **programmed to self-learn as it is introduced to new dialogues and words.**
- In effect, as a chatbot receives new voice or textual dialogues, the number of inquiries that it can reply to and **the accuracy of each response it gives increases.**
  - Meta (as Facebook's parent company is now known) has a machine learning chatbot that creates a platform for companies to interact with their consumers through the Messenger application.
- ○ **Advantages:**
  - Chatbots are convenient for providing customer service and support 24 hours a day, 7 days a week.
  - They also free up phone lines and are far less expensive over the long run than hiring people to perform support.
  - Using AI and natural language processing, chatbots are becoming better at understanding what customers want and providing the help they need.
  - Companies also like chatbots because they can collect data about customer queries, response times, satisfaction, and so on.
- ○ **Disadvantages:**
  - Even with natural language processing, **they may not fully comprehend a customer's input** and may provide incoherent answers.
  - Many chatbots **are also limited in the scope of queries that they are able to respond to.**
  - Chatbots can be expensive to implement and maintain, especially if they must be customized and updated often.
  - The challenges of AI metamorphosing into sentient are far in the future; however, unethical AI perpetuating historical bias and echoing hate speech are the real dangers to watch for.

# West Nile Virus

### Why in News?

Recently, a 47-year-old man in Thrissur, Kerala died due to **West Nile Virus (WNV).** This has caused the Kerala health department to be on alert.

➢ Malappuram's 6-year-old boy also died of the same infection, earlier in 2019.

➢ WNV was **first reported in the state of Alappuzha in 2006**. Later in 2011, it was also reported in Ernakulam, Kerala.

### What is WNV?

➢ **About:**
- ○ The West Nile Virus is a **flavivirus related to the viruses** that are also **responsible for causing St. Louis encephalitis, Japanese encephalitis, and yellow fever.**
- ○ It is a **mosquito-borne, single-stranded RNA virus.**

➢ **Global Prevalence:**
- ○ **Along all major bird migratory routes,** WNV outbreak sites are found.
- ○ **Africa, Europe, the Middle East, North America, and West Asia** are the regions where the virus is commonly found.
- ○ Usually, WNV **infections peak during the period when mosquito vectors are most active and the ambient temperature is high** enough for virus multiplication for most of the countries.

➢ **Prevalence in India:**
- ○ In Mumbai in the year 1952, the **antibodies against WNV were first detected in humans.**
- ○ Since then, the virus activity has been reported in **southern, central, and western India.**
- ○ In **Andhra Pradesh and Tamil Nadu**, WNV was isolated from **Culex vishnui mosquitoes.**
- ○ **In Maharashtra,** it was isolated from **Culex quinquefasciatus mosquitoes.**
- ○ **In Karnataka,** it has been isolated from **humans.**
- ○ Further, WNV neutralizing antibodies were found to be present in human serum collected from **Tamil Nadu, Karnataka, Andhra Pradesh, Maharashtra, Gujarat, Madhya Pradesh, Odisha, Rajasthan and Assam.**
- ○ In **1977, 1978 and 1981, serologically confirmed cases of WNV infections were reported in Vellore and Kolar districts, and in West Bengal in 2017.**
- ○ During an **acute encephalitis outbreak in Kerala, the complete genome sequence of WNV was isolated in 2013.**
- ○ The **association of WNV with eye infection in Tamil Nadu** had been clearly established during an **epidemic of mysterious fever in the first half of 2010.**

➢ **Origin:**
  ○ WNV was first isolated in a woman in the **West Nile district of Uganda in 1937.**
  ○ It was **identified in birds** in the Nile delta region **in 1953.** Before 1997, WNV was not considered pathogenic for birds.
  ○ **Human infections** attributable to WNV have been **reported in many countries for over 50 years.**



TRANSMISSION CYCLE OF WEST NILE VIRUS
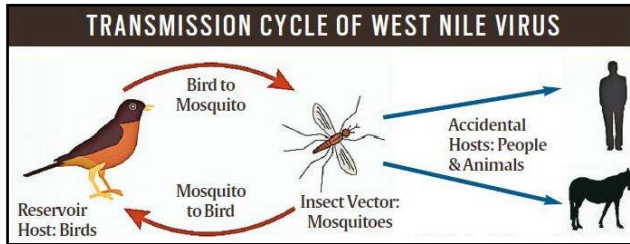
➢ **Transmission Cycle:**
  ○ **Principal vector** for transmission is the **culex species of mosquitoes.**
  ○ **Birds** act as the **reservoir host** of the virus.
  ○ Infected mosquitoes **transmit WNV between and among humans and animals, including birds.**
  ○ When a **mosquito feeds on infected birds**, they become **infected.**
  ○ The **virus circulates in the blood** of those infected mosquitoes for a **few days, eventually getting into the mosquito's salivary glands.**
  ○ The virus **may get injected into humans and animals during later blood meals (when mosquito bites).** Therein, WNV can **multiply and possibly cause illness.**
  ○ WNV can also get transmitted from an **infected mother to her child through blood transfusion** or *via* exposure to the virus in laboratories.
  ○ **No instance of transmission by contact with infected humans or animals** has been reported.
  ○ It **does not spread "through eating infected animals, including birds.**
  ○ Generally, **the incubation period for WNV disease is 2-6 days.** However, this **may range from 2-14 days,** and can also be s**everal weeks in people whose immunity is compromised.**
  ○ According to the **World Health Organization (WHO), no human-to-human transmission of WNV through casual contact has been reported till date.**

➢ **Symptoms:**
  ○ **In 80%** of the infected people, the disease is **asymptomatic.**

  ○ In the rest of the **20% cases, West Nile fever or severe WNV is observed with symptoms such as fever, headache, fatigue, body aches, nausea, rash, and swollen glands.**
  ○ Severe infection may even cause **neurological diseases like West Nile encephalitis or meningitis or West Nile poliomyelitis or acute flaccid paralysis.**
  ○ Also, there are reports of **WNV-associated Guillain-Barré syndrome and radiculopathy.**
  ○ Around **1 in 150 individuals** with WNS is likely to develop a more **severe form of disease.**
  ○ It may take **several weeks or months to recover from severe illness.**
  ○ **Nervous system damage can last forever.**
  ○ In persons with **co-morbidities and immuno-compromised persons** (such as transplant patients), the disease may turn out to be **fatal.**

➢ **Measures of Prevention:**
  ○ The establishment of **an active animal health surveillance system** to detect new cases in birds and horses should be essentially established.
  ○ As WNV outbreaks in animals precede human cases, it is necessary to **provide early warning for veterinary and human public health authorities.**
  ○ The **European Centre for Disease Control and Prevention (ECDC)** has suggested that **28-day blood donor deferral or nucleic acid testing of prospective donors** who have visited or lived in an affected area should be implemented by the **European Union (EU).**
  ○ Besides, **testing for WNV infection must be done for the donors of organs, tissues and cells, who are living in or returning from an affected area.**

➢ **Treatment:**
  ○ As of now, **no treatment/vaccine for WNV is available.**
  ○ Only supportive treatments can be provided to neuroinvasive WNV patients.

# Artificial Light to Fight Against Malaria

### Why in News?

Recently, a study demonstrated that **artificial lights can be used as a weapon to fight against malaria.**

### What are the key highlights?

➢ Light plays a crucial role in the **regulation of biological clocks** such as timing of breeding among birds, hunting by lions and sleeping patterns of humans.

Note:

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- The timing of day and night has **remained relatively constant** owing to the earth's rotation, life on the planet has evolved with such regular day-night cycles.
- **Melatonin** hormone is a gene responsible for **regulating the sleep-awake cycles.**
  - It is found **in plants as well as animals.**
- **A rapid change in the natural sleep cycles** has been observed on account of increased use of artificial light.
- Currently, around **80%** of the world's population is living under **artificially lit skies.**

## What can be the Impact of Artificial Light on Malaria?

- Artificial light can **alter mosquito biology.**
- Malaria-transmitting **mosquito** species *"Anopheles"* **feeds at night**.
- Using artificial light, the mosquitoes **can be tricked to behave as if it's daytime.**
- A short pulse of **Light Emitting Diode (LED)** light, commonly can **delay the onset of biting by hours in the mosquito "Anopheles".**
- Therefore, it **reduces biting rates and malaria transfer.**

## What are the Challenges?

- The first challenge is that it is still unclear **how artificial lights might be used to lessen the risk of malaria infections.**
- Demonstration of the effects of artificial light in controlled laboratory settings is one thing, but **rolling out their use as an effective vector control strategy** is quite another.
- Moreover, **LED light can have negative impacts on human health like disrupted sleep.**

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**What is Malaria?**

- **About:**
  - **Malaria** is a **life-threatening mosquito borne blood disease caused by plasmodium parasites.** It is predominantly found in the **tropical and subtropical areas of Africa, South America as well as Asia.**
  - The parasites spread through the **bites of infected female Anopheles mosquitoes.**
  - After entering the human body, parasites initially multiply within the liver cells and then **attack the Red Blood Cells (RBCs) resulting in their rupture.**

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- There are **5 parasite species** that cause malaria in humans, and **2 of these species –** *Plasmodium falciparum* **and** *Plasmodium vivax* **– pose the greatest threat.**
- **Symptoms** of malaria include **fever and flu-like illness, including shaking chills, headache, muscle aches, and tiredness.**
- It is **preventable as well as curable.**

- **Malaria Vaccine:**
  - Known by its lab initials as **RTS, S but branded as Mosquirix,** the vaccine has passed lengthy scientific trials that found it to be **safe and reducing the risk of malaria by nearly 40%,** the best recorded.
  - It was developed by **GlaxoSmithKline (GSK)** company and **approved by the European Medicines Agency in 2015.**
  - The RTS, S vaccine **trains the immune system to attack the malaria parasite (Plasmodium (P.) falciparum, the deadliest species of the malaria parasite).**

- **Global Scenario:**
  - Although a **decline** in total no. of cases from about **81.1 cases per 1,000 population to 59 per 1,000 since 2000,** the world has not yet won the war against Malaria.
  - Globally, **around 240 million cases and 6,00,000 deaths** were reported in **2020.**
  - **Africa** carries the **world's largest disease burden for Malaria.**
  - In Africa, **94% of global cases and 96% of global deaths** have been recorded. It is alarming that **children aged five or younger** account for **80% of these deaths.**

- **Challenges**
  - Though vaccines look promising, **antimalarial drug resistance** specifically in East Africa is rising.
  - **Genetic mutations in the parasite** enables them to **escape routine diagnosis.**
  - **Increased resistance to insecticides** has been evolving in the mosquitoes.

- **Need of the hour**
  - This situation undermines the **requirement for sharpening the vector control options, and exploring new strategies.**

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# Environment & Ecology

## Highlights

- Heavy Metal Pollution
- UN Funds Insufficient for Climate Disasters: Oxfam
- Culling of Vermin
- Biodiversity Park in Sirumalai Hills: Tamil Nadu
- Ban on use of Coal in Delhi-NCR
- Etalin Hydro Power Project
- World Environment Day
- Stockholm+50

- Cheetah Relocation in India
- Biomass Electricity
- Painted Leopard Gecko
- Global Sustainable Development Report, 2022
- Biomass Co-Firing
- Kosi River Avulsions
- Tracking SDG 7

## Heavy Metal Pollution

### Why in News?

Recently, the **Center for Science and Environment** has reported that rivers of India are facing severe metal pollution.

➤ **Three out of every fou**r river monitoring stations in India have observed alarming levels of **heavy toxic metals** such as **lead, iron, nickel, cadmium, arsenic, chromium** and **copper.**

### What is Heavy Metal Pollution?

➤ **Heavy Metals:**
  ○ **Heavy metals** may be defined as elements with an **atomic number** larger than **20** and an **atomic density greater than 5 g cm-3** that must possess metal-like characteristics. **Example**: **arsenic, cadmium, chromium, copper, lead, manganese, mercury, nickel, uranium** etc.

➤ **Heavy Metal Pollution:**
  ○ Heavy metal pollution has been caused in our **rivers, soils, and environment** as a result of rapidly growing **agriculture** and **metal industries, improper waste management**, **heavy use of fertilizers,** and **pesticides.**
  ○ **Agricultural** and **industrial operations, landfilling, mining,** and **transportation** are the primary sources of heavy metals in **groundwater.**

○ Through the **agricultural water runoff heavy metals** reach upto river.

○ **Discharge of wastewater** from industries (like the tannery industry which is a big source of chromium heavy metals) directly into **river bodies** intensified the severity of the **heavy metal pollution.**

○ Heavy metals have the property of long persistent in plants, animals and environment.

### What are the Sources of Heavy Metals?

➤ There are two kinds of sources through which the heavy metals enter into the environment.
  ○ **Natural Source:**
    ● Heavy Metals are naturally present in the **earth's crust**. Rocks are the natural source of heavy metals. Heavy Metals are present in the **rocks** in the form **minerals**. Examples: arsenic, copper, lead etc
  ○ **Anthropogenic Source:**
    ● **Mining, industrial,** and **agricultural operations** are all anthropogenic sources of **heavy metals** in the environment.
    ● These heavy metals are produced during the **mining** and **extraction** of various elements from their respective **ores**.
    ● **Heavy metals emitted** into the atmosphere during **mining, smelting,** and other **industrial activities** are deposited on land by **dry** and **wet deposition.**

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- Discharge of **wastewaters** such as **industrial effluents** and **domestic sewage** add heavy metals to the environment.
- Application of **chemical fertilizers** and **combustion of fossil fuels** also contribute to the **anthropogenic input of heavy metals** in the environment.

## *What has been Observed in Monitoring of Heavy Metal Pollution?*

➢ There are **764 river quality monitoring stations** in India, spread over **28 states.**

➢ Out of the **33 monitoring stations in Ganga, 10** had **high levels of heavy metals contaminants.**

➢ The **Central Water Commission** examined water samples from 688 sites for heavy metals between August 2018 and December 2020.

➢ **Total coliform** and **biochemical oxygen demand** were high in **239 and 88 of** the **588 water quality stations** examined for pollution throughout **21 states,**

➢ It indicates that **wastewater treatment** from **industry, agricultural, and domestic households** is inadequate.

➢ According to the **Center for Science and Environment's State of the Environment Report 2022,** the river, which is the focus of the **Namami Gange mission,** contains high levels of lead, iron, nickel, cadmium, and arsenic (CSE).

➢ The report is a yearly compilation of data on environmental development obtained from public sources.

➢ According to the **Central Pollution Control Board, ten states** do not treat their sewage at all.

➢ In India, 72% of sewage waste is dumped untreated.

## *What are the Consequences of the Heavy Metal Pollution?*

➢ These toxic heavy metals entering the environment may lead to **bioaccumulation** and **biomagnifications.**
  - ❍ **Bioaccumulation:**
    - The net **accumulation of a pollutant in an organism** from all sources, including water, air, and food, is known as bioaccumulation.'
  - ❍ **Biomagnifications:**

- Biomagnification is the **accumulation of a chemical by an organism** as a result of water and food exposure, **resulting in an increase in concentration** that is higher than would have been expected from equilibrium.

➢ Some heavy metals have an effect on **biological activities** and **growth,** while others accumulate in one or more organs, resulting in a variety of **severe diseases** such as **cancers, skin diseases, nervous system disorders** etc.
  - ❍ **Metal toxicity** results in the production of **free radicals**, which **damages DNA.**

➢ These heavy metals are not readily degradable in nature and accumulate in the animal as well as human bodies to a **very high toxic** amount.
  - ❍ Heavy metal intake has been related to **developmental retardation, renal damage,** a **variety of cancers,** and **even death** in extreme cases.

### What is Namami Gange Mission?

➢ Namami Gange mission is an **Integrated Conservation Mission**, approved as a **'Flagship Programme'** by the **Union Government** in June 2014 to accomplish the twin objectives of effective **abatement of pollution and conservation** and rejuvenation of **National River Ganga.**

➢ It is being operated under the **Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti**.

➢ The program is being implemented by the **National Mission for Clean Ganga (NMCG),** and its state counterpart organizations i.e S**tate Program Management Groups (SPMGs).**

➢ **NMCG** is the implementation wing of **National Ganga Council** (set in 2016; which replaced the **National Ganga River Basin Authority - NGRBA**).

➢ **The main pillars of the programme are:**
  - ❍ Sewage Treatment Infrastructure
  - ❍ River-Front Development
  - ❍ River-Surface Cleaning
  - ❍ Biodiversity
  - ❍ Afforestation
  - ❍ Public Awareness
  - ❍ Industrial Effluent Monitoring
  - ❍ Ganga Gram

Note:

**What is the Central Water Commission?**

➤ The Central Water Commission is the apex technical organization in the country for development of water resources and is an attached organization of the **Ministry of Jal Shakti.**

➤ The Commission is responsible for **initiating, coordinating** and **furthering**, in consultation with the **State Governments**, the schemes for **control, conservation, development** and **utilization of water resources** throughout the country for the purpose of **irrigation, flood management, power generation, navigation** etc.

# UN Funds Insufficient for Climate Disasters: Oxfam

## Why in News?

Recently, **Oxfam International** released a report, which says the **UN (United Nations)** requires **eight times more Climate Finance than 20 years** ago to be able to provide humanitarian aid to **Low-Income Countries** during Climate-Related Disasters (Droughts, Floods or Wildfires).

➤ The latest **Intergovernmental Panel on Climate Change (IPCC)'s sixth assessment reports** made it evident that more climate-related disasters are in the offing and therefore climate change will escalate the loss and damage suffered by these marginalized communities.

**What is Oxfam International?**

➤ Oxfam International is a group of independent non-governmental organisations formed in 1995.

➤ The name "Oxfam" comes from the Oxford Committee for Famine Relief, founded in Britain in 1942.

    ○ The group campaigned for food supplies to starving women and children in enemy-occupied Greece during the Second World War.

➤ It aims to maximize efficiency and achieve greater impact to reduce global poverty and injustice.

➤ The Oxfam International Secretariat is based in Nairobi, Kenya.

## What are the Findings?

➤ In 2000-02, UN appealed for USD 1.6 billion as humanitarian aid. The appealed amount rose to an average of USD 15.5 billion in 2019-2021 — an unprecedented 819% increase.

➤ Rich countries have been able to **deliver 54% of the UN's appeals in the last five year**s, leaving a massive deficit of USD 28-USD 33 billion.

➤ People in **low-income countries are most vulnerable** to the impacts of climate-related disasters, be it droughts, floods or wildfires, as these disasters further exacerbate poverty and death affecting them disproportionately.

➤ Besides the huge financial burden, **loss and damage due to climate crisis encompass health, biodiversity and loss of indigenous knowledge**, among gender issues and other related factors.

➤ For every USD 2 needed for the UN's humanitarian aid, rich donor countries provide USD 1.

➤ This is despite the fact that the **richest 1% people on Earth are emitting twice as much carbon pollution** as the poorest half of humanity.

➤ Afghanistan, Burkina Faso, Burundi, Chad, Democratic Republic of Congo, Haiti, Kenya, Niger, Somalia, South Sudan, and Zimbabwe are among the ten countries most in need of **Climate Finance.**

➤ Richer people are less exposed to climate risks and better able to weather disasters. They live in more secure places and have more assets to draw on. Poorer people have less protection and therefore experience greater loss and damage, which accumulates over time.

➤ The economic cost of loss and damage by 2030 will rise to the range of USD 290-USD 580billiont.

## What are the Recommendations?

➤ Paying the cost of climate-driven loss and damages should be on the basis of responsibility — not charity.

➤ Rich countries, rich people, and big corporations most responsible for causing climate change must pay for the harm they are causing.

➤ Need establishment of a facility to draw innovative sources of finance from rich countries, which was rejected by developed nations at the **26th Conference of Parties (CoP26)** to the United Nations Framework Convention on Climate Change in 2021.

➤ At CoP27, governments should agree to make loss and damage finance a core element of the United Nations Framework Convention on Climate Change (UNFCCC)'s Global Stock take.

Note:

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**What is Climate Finance?**

➢ **About:**

  ○ Climate finance refers to **local, national or transnational financing**—drawn from public, private and alternative sources of financing—that seeks **to support mitigation and adaptation actions that will address** climate change.

  ○ Climate finance is needed for mitigation, because large-scale investments are required to significantly reduce emissions.

  ○ It is **equally important for adaptation, as significant financial resources are needed to adapt to the adverse effects** and reduce the impacts of a changing climate.

➢ **Principles of Climate Finance:**

  ○ **Polluter Pays:**

    ● The 'polluters pays' principle is the **commonly accepted practice** according to which those who produce pollution should bear the costs of managing it to prevent damage to human health or the environment.

    ● This principle underpins most of the regulation of pollution affecting land, water and air **formally known as the 1992 Rio Declaration.**

    ● It has also been applied more specifically to emissions of greenhouse gases which cause climate change.

  ○ **Common but Differentiated Responsibility and Respective Capability (CBDR–RC):**

    ● CBDR–RC is a **principle within the United Nations Framework Convention on Climate Change (UNFCCC).**

    ● It acknowledges the different capabilities and differing responsibilities of **individual countries in addressing climate change.**

  ○ **Additionality:**

    ● Climate finance **should be additional to existing commitments to avoid the diversion** of funding for development needs to climate change actions.

    ● This includes **use of public climate finance** and investments by the private sector.

  ○ **Adequacy & Precaution:**

    ● In order to take **precautionary measures to prevent or minimise the causes of climate change** as a stated goal under UNFCCC, the level of funding needs to be sufficient to keep a global temperature within limits as possible.

    ● A better level of **adequacy might be increased in the national estimates of the needed climate funds**, this will help build planned investments with respect to INDC (Intended Nationally y Determined Contribution).

  ○ **Predictability:**

    ● Climate finance **must be predictable to ensure sustained flow** of climate finance.

    ● It can be done through multi-year, medium-term funding cycles (3 – 5 years).

    ● This allows for a**n adequate investment program** to scale up the country's national adaptation and mitigation priorities.

# Culling of Vermin

## Why in News?

The **Wildlife (Protection) Amendment Bill, 2021** was introduced in the Parliament to amend the **Wildlife (Protection) Act, 1972** in December 2021.

➢ The basic motive of the amendment is to align the act according to changes in circumstances and trying to emulate a proper solution as per culling of vermin are concerned.

## What are Vermin?

➢ **Vermins** are basically a **problematic animal** or a **nuisance creature** because they threaten **humans, crops, livestock,** or **property.**

➢ Species which have been classified as the **Vermin** placed in **schedule V** of the **Wildlife Protection Act, 1972.**

  ○ Example: common crows, fruit bats, rats and mice, which may be hunted freely.

➢ The act does not define the word **Vermin**. The **62$^{nd}$ section** of the **Wildlife Protection Act** grants the central government the power to declare any wild animal as vermin.

➢ Wild animal species which are placed in the **Schedule I and Schedule II** of the **Wildlife Protection Act, 1972** can not be declared as **Vermin**.

Note:

○ An animal can be declared as vermin for any **specifed area** and a **specified period of time.**

➤ In order to prevent **human-wildlife conflicts,** several states in the past have petitioned to declare various animals to be **vermin,** including **elephants, Indian porcupine, bonnet macaque, common langur** and **barking deer.**

➤ The Center declared **rhesus monkeys** in **Himachal Pradesh**, **wild boar** in **Uttarakhand** and **Nilgai** in **Bihar** to be **vermin.**

### *What is the Wildlife protection Act, 1972?*

➤ **Wild Life (Protection) Act, 1972** provides a **legal framework** for the protection of various species of wild animals and plants, the management of their habitats, and the regulation and control of trade in wild animals, plants and products made from them.

➤ The Act also lists **schedules of plants and animals** that are afforded various degrees of protection and monitoring by the government.

➤ The **Wildlife Protection Act, 1972** currently has **six schedules** that assign **varying degrees of protection** to animals and plants.

➤ The Listed breeds and types of animals in **Schedule I and part II of Schedule II** get supreme protection. For example, Himalayan Brown Bear, Indian Elephant, Golden Geckos, Andaman Teal, Hornbills, Black Coral, Amara Brucei and many more. Offences under these are prescribed the highest penalties.

➤ The Listed breeds and types of animals in **Schedule III and Schedule IV** are also secured, but the penalties are comparatively much lower. For example, Barking Deer, Falcons, Kingfisher, Tortoise etc.

➤ **Schedule V** includes the animals which can be hunted. For example, Common Crow, Mice, Rats, Fruit Bats etc.

➤ The plants, trees and crops mentioned in **Schedule VI** are banned from Cultivation and Planting. For example, Kuth, Red Vanda, Pitcher Plant etc.

### *What Changes may be Introduced Through The Wildlife Protection Amendment Bill, 2021?*

➤ The **Wild Life (Protection) Amendment Bill, 2021,** makes a significant amendment in that it **reduces the number of schedules from six to four.**

➤ **Schedule I** for species that will enjoy the highest level of protection.

➤ **Schedule II** for species that will be subject to a lesser degree of protection.

➤ **Schedule III** that covers plants.

➤ It seeks to **do away with Schedule V** entirely. It removes the schedule for vermin species. Vermin refers to small animals that carry diseases and destroy food.

➤ It inserts a new schedule for specimens listed in the **Appendices under CITES (scheduled specimens).**

➤ The **Central government** will be empowered to **directly declare** any species to be **vermin.**

➤ Thus, to declare any species as vermin becomes easier.

➤ This change **could potentially impact 41 species of mammals, 864 birds, 17 reptiles and amphibians and 58 insects**.

### *What is the Need of the Wildlife (Protection) Amendment Bill, 2021?*

➤ **Growing human-wildlife conflicts** poses a threat to both animals and people.

○ Such incidences in the form of crop/livestock damage are widely reported from different parts of the country.

● The **Himachal Pradesh Department of Agriculture** recorded a crop loss of **184.28 crore in 2016** as a result of wild animals, notably monkeys.

➤ Since **2017**, there have been **7,562 reports of agricultural invasion** by wild animals in **Tamil Nadu**.

### *What is the history of vermin & ecological imbalance?*

➤ The genesis **vermin category** of the **The Wildlife Protection Act,1972** is a **colonial legacy** which has minimal scientific foundation.

○ The **Tudor Vermin Acts** provided for the elimination of **undesirable animals** and **agricultural pests**.

➤ The **Preservation of Grain Act, 1532**, was one of the **Vermin Acts**, and it established an **official list of vermin' animals**.

○ Owls, otters, foxes, hedgehogs, and other animals are seen as terrible food competitors with humans.

➤ By giving **financial incentives**, the Indian government has granted blanket permission to **eradicate the vermin population**.

○ The **Government of Himachal Pradesh**, for example, offered **Rs 500-700** for each **monkey** exterminated as **vermin.**

Note:

- This approach of the government can cause **severe ecological imbalance.**
- **Mass extermination** can cause a **vacuum in the food chain** of the area.
- **Methods of lethal control of human-wildlife conflict** endanger the targeted species but traps and snares often prove fatal for non-targeted animals**.**
  - After the **Karnataka government** legalized the culling of wild boars in 2016 in the cause of agricultural damage, the number of snares in the **Nagarhole National Park** in **Karnataka** surged.
  - Species such as **tigers, leopards,** and **bears (all Schedule I animals)** were also caught in similar traps.
- The **Himachal Pradesh Government** has declared the **rhesus macaque** as **vermin four times** since 2020. This ultimately led to a **decrease in the population by 33.5%.**
- **Non-lethal methods** of human-wildlife conflict management have been shown to be **more effective** than **lethal methods.**
- More importantly, **mass culling** does not address the real reason.

### *Why are human-wildlife conflicts rising?*

- The main reason for the rise in Human-Wildlife Conflicts are **habitat destruction and encroachment.**
- **Developmental projects, industrialisation and agricultural expansion** have drastically **reduced forest cover**.
- This ultimately led to bringing the wild animals near agricultural settlements creating the problems of human-wildlife conflict.

### *Way Forward*

- Declaring an animal a **'vermin'** is neither a **sustainable** nor an **effective solution** towards **mitigating human-wildlife conflicts.**
- Consequently, there is an urgent need to maintain a **database** on the extent of crop damage and conduct **scientific surveys or censuses** on problem-causing animals and conflict patterns.
- **Unscientific and abrupt decisions** made without data will have a long-lasting impact on the **ecosystem and biodiversity.**

# Biodiversity Park in Sirumalai Hills: Tamil Nadu

### *Why in News?*

The Government of Tamil Nadu is developing a biodiversity park in the **Sirumalai Hill Range** in Dindigul district.

- The main aim is **to create awareness for the sustainable management of the ecologically sensitive area.**

### *What are the Key Points of this Park?*

- This park is **a nature reserve that harbours the natural heritage of the area and has conservation, education and cultural values** and will enhance the quality of the environment.
- Various biodiversity components such as mammals, birds, reptiles, amphibians, etc, have been showcased here.
- Different types o**f flowering plants have been planted all around the park and necessary irrigation facilities have been provided.**
- Assemblage of nectar plants to attract butterflies and host plants has also been planned.

### *What is a Biodiversity Park?*

- **About:**
  - The biodiversity park is **a unique landscape of wilderness** where ecological assemblages of native plant and animal species in the form of biological communities are recreated in a region.
  - The underlying principle of the park is **to recreate self-sustaining ecosystems with native flora and fauna** which are characteristics of the area.
- **Objectives:**
  - Creating awareness among the forest stakeholders, the public and the student community **about biological diversity and its significance.**
  - Creating plant diversity that is **endangered, threatened and highly valuable for human existence.**
  - Creating a **gene bank with important plant species** including rare and endemic ones.

Note:

○ Creating a **carbon sink** for future generations with indigenous species to **mitigate problems of global warming and climate change.**

○ Promoting the **culture of conservation and appreciation towards natural resources** and its management.

○ Creating **livelihood opportunities for local communities**, especially the tribal community who are part and parcel of the forest ecosystem from time immemorial.

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## What are the Key Points Related to Sirumalai Hill Range?

➢ **About:**

○ The Sirumalai Hills are **spread over 60,000 acres in** Dindigul District of Tamil Nadu.

○ They are considered to be the **spur of the Eastern Ghats.** They are located about 25 kilometres from Dindigul town, at an altitude of 400 to 1,650 metres from mean sea level.

○ The hills act as a repository of several rare and endemic plants.

➢ **Flora:**

○ The lower hill range consists of highly disturbed **scrub forest** while the major portion of the middle hill ranges are occupied by tropical mixed dry deciduous forest.

○ The higher elevations are occupied by semi evergreen forest. The woodland **savannahs** are found along the slopes in the higher altitudes.

➢ **Fauna:**

○ Animals like **Gaur**, **Leopard**, spotted deer, mouse deer, barking deer, **Jackal**, **Sloth Bear**, wild boar, **Indian pangolin**, **slender loris** and several species of **reptiles** and avifauna (Birds) are found in the region.

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# Ban on use of Coal in Delhi-NCR

## Why in News?

Recently, the **Commission for Air Quality Management (CAQM)** has issued directions to ban the use of coal in industrial, domestic and other miscellaneous applications in the entire Delhi-NCR region from 1st January 2023.

➢ This step is taken to **bring down greenhouse gas emissions** in Delhi NCR.

➢ Delhi is among the world's most polluted capital cities.

○ According to the **pollution index**, on average, the AQI in the capital, its neighboring cities - Gurgaon, Noida, and Ghaziabad - is in the 300-400 level mark.

## What is the Significance of this Step?

➢ **Save Tonnes of Coal Annually:**

○ The Step to drive the switching over to cleaner fuel such as natural gas and biomass **will not only help save 1.7 million tonnes of coal annually,** but also reduce pollutants including **Particulate Matter (PM)**, **Nitrogen Oxide (NOx)**, $CO_2$ and **Carbon monoxide (CO).**

● However, **thermal power plants** in NCR are allowed to use **low-sulphur coal.**

➢ **Help in Tackling Air pollution:**

○ **Heavy pollution from coal is a significant contributor to the degrading quality** of air in the NCR and surrounding areas, and thus a need to switch to a cleaner fuel has been felt over time.

● Every year, **air pollution from fossil fuels takes millions of lives, increases our risk of stroke**, lung cancer and asthma, and costs us a huge amount of money.

➢ **Natural Gas gets a Boost:**

○ The decision to ban use of coal as a fuel **will boost the prospects of natural gas in the NCR.**

● As per the **Petroleum Planning & Analysis Cell**, the global per capita natural gas consumption is 496 cubic meters) compared to 43 cu m for India.

## What Steps have been taken to Combat Air Pollution so far?

➢ **Promoting Clean Fuels:**

○ CAQM has been focusing on **shifting industries to piped natural gas and other clean fuels.**

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Note:

○ Around 1.7 million tonnes (MT) of coal is consumed annually by various industries in the NCR, with about 1.4 MT alone being consumed in the six major industrial districts.

➢ **Supreme Court Order:**

○ In December 2021, the **Supreme Court ordered the government to find a permanent solution to the air pollution menace** occurring every year in Delhi and NCR.

○ Accordingly, the **CAQM formed an Expert Group** to deliberate upon all such suggestions and proposals.

○ The Expert Group has strongly recommended phasing out use of heavily polluting fossil fuels like coal and mandating cleaner fuels, to the extent possible.

## *What are the Related Initiatives taken?*

➢ **System of Air Quality and Weather Forecasting and Research (SAFAR) Portal**

➢ **Air Quality Index:** AQI has been developed for eight pollutants viz. PM2.5, PM10, Ammonia, Lead, nitrogen oxides, sulphur dioxide, ozone, and carbon monoxide.

➢ **Graded Response Action Plan**

➢ For Reducing Vehicular Pollution:

○ **BS-VI Vehicles,**

○ **Push for Electric Vehicles (EVs),**

○ **Odd-Even Policy** as an emergency measure

➢ **New Commission for Air Quality Management**

➢ Subsidy to farmers for buying **Turbo Happy Seeder (THS) Machine**

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**What are the Key Highlights about Coal?**

➢ It is **one of the most abundantly found fossil fuels**. It is used as a domestic fuel, in industries such as iron and steel, steam engines and to generate electricity. Electricity from coal is called thermal power.

➢ The **coal which we are using today was formed millions of years ago** when giant ferns and swamps got buried under the layers of earth. Coal is therefore referred to as Buried Sunshine.

➢ The **leading coal producers of the world include** China, India, US, Indonesia, Australia.

➢ The **coal producing areas of India include** Raniganj, Jharia, Dhanbad and Bokaro in Jharkhand.

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➢ **Coal is also classified into four ranks:** anthracite, bituminous, subbituminous, and lignite. The ranking depends on the types and amounts of carbon the coal contains and on the amount of heat energy the coal can produce.

# Etalin Hydro Power Project

### *Why in News?*

Wildlife scientists and conservationists in **Arunachal Pradesh** flagged threats to local biodiversity from the proposed Etalin hydroelectric (3,097 MW) project in **Dibang Valley** to raise the issue, they approached the **Forest Advisory Committee (FAC)** under the Union Ministry of Environment, Forest and Climate Change (MoEF&CC).

➢ **WildLIfe Institute of India (WII)** and the **National Tiger Conservation Authority (NTCA)** have suggested taking cognizance of certain safeguards and mitigation measures while considering project approval.

➢ FAC ordered the formation of a **four-member committee** to address apprehensions concerning wildlife as well as endemic flora and fauna of the area in a holistic manner.

### *What is the Significance of Dibang River?*

➢ The Project is based on the **river Dibang** and is proposed to be completed in 7 years.

○ **Dibang is a tributary of the Brahmaputra River** which flows through the states of Arunachal Pradesh and Assam.

➢ It envisages construction of two dams over the tributaries of Dibang: **Dir and Tangon.**

➢ The Project falls under the richest **bio-geographical province of the Himalayan zone** and would be located at the junction of major biogeographic zones like Palearctic Zone and Indo-Malayan Zone.

➢ It is expected to be **one of the biggest hydropower project**s in India in terms of installed capacity.

### What are the Concerns Raised by the Environmentalists?

➢ Conservationists highlighted that the FAC sub-committee **ignored established tenets of forest conservation and related legal issues** while recommending the proposal.

Note:

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- FAC **ignored the threat of forest fragmentation.**
  - **Forest fragmentation** results from ill-planned intrusion of developmental projects into contiguous landscapes with natural forests and threatens rare floral and faunal species in a biodiversity hotspot.
- FAC's **site inspection report was also questioned for leaving out key details** like number of grids across an altitudinal range inspected and the status of vegetation there, direct and indirect signs of wild animals listed in the various **schedules of the Wildlife Protection Act, 1972** and overall appreciation of the ecological value of the area.
- The **inadequacy of the Environment Impact Assessment report** on Etalin was also highlighted.
  - Wildlife officials ignored observations which include the threat to 25 globally endangered mammal and bird species in the area to be affected.
- The proposed **mitigation measures** like setting up butterfly and reptile parks are **inadequate and insufficient.**

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**What is the Forest Advisory Committee?**
- It is a statutory body which was constituted by the **Forest (Conservation) Act 1980.**
- 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. However, its role is advisory.

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# World Environment Day

### Why in News?

World Environment Day is celebrated on **5th June every year** to encourage awareness and environmental protection.

- On the Occasion, India launched **'Lifestyle for the Environment (LiFE) Movement'.**

### What are the Key Highlights about World Environment Day?

- **About:**
  - The **United Nations Assembly** established World Environment Day in 1972, which was the **first day of the Stockholm Conference on the human environment.**
  - The celebration of world environment day every year **is done according to a specific theme** and slogan which addresses the major environmental concern of the time.
  - It is **hosted by a different country each year.**
    - For example, **India hosted the 45th celebration of World Environment Day** under the theme **'Beat Plastic Pollution'.**
  - World Environment Day celebration last year also kicked off the **UN Decade on Ecosystem Restoration (2021-2030)** which is a global mission to revive billions of hectares, from forests to farmlands, from the top of mountains to the depth of the seas.
- **Theme for 2022:**
  - **OnlyOneEarth:**
    - It mirrors the theme of the **first World Environment Day in 1973.**
- **Significance:**
  - 2022 is a historic milestone as it marks 50 years since the 1972 **Stockholm Conference.**

### What is LiFE Movement?

- **About:**
  - The idea of LiFE was introduced by India during the **26th United Nations Climate Change Conference of the Parties (COP26)** in Glasgow in 2021.
    - The **idea promotes an environmentally conscious lifestyle** that focuses on 'mindful and deliberate utilisation' instead of 'mindless and wasteful consumption'.
  - With the launch of the Mission, the prevalent **"use-and-dispose" economy-governed by mindless** and destructive consumption-will be replaced by a **circular economy,** defined by conscious and deliberate consumption.
- **Objective:**
  - The Movement **aims to utilise the power of collective action** and nudge individuals across the world to undertake simple climate-friendly actions in their daily lives.
  - It also **seeks to leverage the strength of social networks to influence social norms** surrounding climate.

Note:

○ The Mission plans to create and nurture a global network of individuals, namely **'Pro-Planet People' (P3)**.

● P3 will have a **shared commitment to adopt and promote environmentally friendly lifestyles**.

● Through the P3 community, the **Mission seeks to create an ecosystem that will reinforce and enable environmentally friendly** behaviours to be self-sustainable.

## *What has India Achieved in Conserving the Environment?*

➢ **Increase in Forest Cover:**

○ **India's forest cover** is increasing and so is the population of lions, tigers, leopards, elephants and rhinos.

● The **total forest cover is 21.71% of the total geographical area** in 2021, compared with 21.67% in 2019 and 21.54% in 2017.

➢ **Installed Electric Capacity:**

○ India's commitment to **reach 40% of installed electric capacity** from non-fossil fuel-based sources has been achieved, 9 years ahead of schedule.

➢ **Ethanol Blending Target:**

○ The **target of 10% ethanol blending** in petrol has been achieved 5 months ahead of the November 2022 target.

○ This is a major accomplishment given that blending was hardly 1.5% in 2013-14 and 5% in 2019-20.

➢ **Renewable Energy Target:**

○ **Renewable energy** has a very high focus in the government.

○ The **country's installed Renewable Energy (RE) capacity** stands at 150.54 GW (solar: 48.55 GW, wind: 40.03 GW, Small hydro Power: 4.83, Bio-power: 10.62, Large Hydro: 46.51 GW) as on 30th Nov. 2021 while its nuclear energy based installed electricity capacity stands at 6.78 GW.

● **India has the 4th largest wind power capacity** in the world.

## *What are the Other Related Initiatives?*

➢ **National Afforestation Programme (NAP):**

○ It **focuses on the rehabilitation of degraded forests** and afforestation around forests.

➢ **National Mission for a Green India (GIM):**

○ It is under the **National Action Plan on Climate Change (NAPCC)** and aimed at improving and increasing tree cover as a climate adaptation and mitigation strategy.

➢ **National Biodiversity Action Plan:**

○ It has been **launched to implement strategies for the reduction in rates of degradation**, fragmentation and loss of natural habitats.

➢ **Rural Livelihood Schemes:**

○ Recognition of natural resources intrinsically linked to rural livelihoods is also reflected in flagship schemes like the **Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) and the National Rural Livelihood Mission (NRLM).**

# Stockholm+50

## *Why in News?*

**Stockholm+50** is being held in **Stockholm, Sweden**. It will **commemorate the 50 years since the 1972 United Nations (UN) Conference on the Human Environment** (also known as the Stockholm Conference).

➢ The **UN General Assembly** will be convening this international meeting.

➢ This is being held at a time **when the world is facing a triple planetary crisis of climate change, pollution and waste, nature and biodiversity loss,** as well as other planetary issues even after 50 years of the Stockholm Declaration. This is threatening the **achievement of the Sustainable Development Goals** .

➢ A **sustainable recovery from the Covid-19 pandemic** will also remain as one of agenda points.

## *What is Stockholm Conference, 1972?*

➢ **Background:**

○ Climate change was **first discussed** using emerging scientific evidence in the **UN General Assembly in 1968.**

● In **1967,** a research study provided the **actual estimates of global temperature based on $CO_2$ levels.** Also, it was predicted that the **doubling of $CO_2$ from the current level would result in nearly 2°C rise in global temperature.**

○ The **idea of the Stockholm Conference was first proposed by Sweden.** That's why it's also termed the "**Swedish Initiative**".

➢ **About:**

○ The **United Nations Conference on the Human Environment in Stockholm** was held from **5th –16th June, 1972.**

○ This was the **first global convergence on the planetary environment.**

○ The theme was '**Only One Earth'.**

○ **122 countries participated** in the conference.

➢ **Aim:**

○ Creating a common governance framework for the planetary environment and natural resources.

➢ **Stockholm Declaration and Action Plan for the Human Environment**

○ **Stockholm Declaration:**

● **70 out of 122 participant countries** which were developing and poor countries adopted the Stockholm Declaration.

● The Stockholm Declaration **contained 26 principles** that marked the beginning of a dialogue between developed and developing countries.

● This built the **"interconnections between development, poverty and the environment"**.

○ **Action Plan:**

● The Action Plan contained **three main categories** that were further broken down into **109 recommendations**:

■ Global Environmental Assessment Programme (watch plan)

■ Environmental management activities

■ International measures to support assessment and management activities carried out at the national and international levels.

➢ **Three Dimension of the Conference:**

○ Countries agreed to **not "harm each other's environment o**r the areas beyond national jurisdiction".

○ An **action plan to study the threat to Earth's environment.**

○ **Establishment** of an international body called the **UN Environment programme (UNEP)** to bring in cooperation among countries.

## What were the key agreements of the Stockholm Declaration?

➢ **Natural resources such as air, water, land, flora and fauna must be safeguarded** through careful planning for the benefit of the present and future generations.

➢ The release of **toxic substances and heat emissions should not be allowed to exceed** the capacity of the environment.

➢ The **poor and developing nations must be supported** in their struggle against pollution.

➢ The environmental policies of the states **should support the present or future development potential of developing countries.**

➢ Appropriate steps should be taken by States and international organisations to **reach an agreement on meeting the possible national and international economic consequences resulting from the application of environmental measures.**

➢ According to the UN charter and principles of international law, **the States have the sovereign right to exploit their own resources as per their own environmental policies.**

○ However, the states have this **responsibility of making sure that activities within their jurisdiction or control do not cause any harm to the environment of other States or of areas beyond the limits of national jurisdiction.**

## What is the importance of Stockholm, 1972?

➢ The first global conference on the environment **happened when the environment was not a global concern** or a subject of importance for any nation.

➢ Previously, the **UN charter never contained the domain of environment to deal with.**

➢ **No country had an environment ministry until 1972.**

○ Afterwards, countries like **Norway and Sweden set up their ministries for the environment.**

○ **In 1985, India set up its ministry of environment and forest.**

➢ After 1972, **environmental issues** like species extinction and mercury poisoning started making headlines and public consciousness increased.

➢ The Stockholm conference **started the contemporary "environmental era".**

Note:

- Many of **today's conventions** on the environmental crises **trace their origin to the Stockholm Declaration.**
  - ○ **United Nations Framework Convention on Climate Change (UNFCCC)**
  - ○ **United Nations Convention to Combat Desertification (UNCCD)**
  - ○ **Convention on Biological Diversity (CBD)**

### *What are the Challenges?*

- Since the very beginning, **global politics impacted the conference adversely.**
- Some nations expressed their concerns regarding the **dominance of rich countries and said that the policies are more in the interests of wealthier, industrialised countries.**
- An **uncoordinated response from the nations** has contributed to the fact that the **world is on track to warm at least 3°C above pre-industrial levels by 2100.** This is **twice the 1.5°C warming** as mandated in the **Paris Agreement.**
- Within the next **50 years, 1-3 billion people** are projected to be **left outside the climate conditions.**
- **Poverty is the biggest hurdle** in the way of adopting sustainable measures for a healthy environment, as poverty can't be eradicated without the use of science and technology.
- Unless the poor or developing countries are in a position to provide employment and meet daily necessities of the people, the policies towards sustainable environment can't be implemented appropriately.

# Cheetah Relocation in India

### *Why in News?*

India will be soon releasing cheetahs from South Africa and Namibia into the wild at **Kuno Palpur** in Sheopur district of Madhya Pradesh.

- It will initiate **India's ambitious plan of transcontinental relocation of cheetahs**.
- The country's last spotted cheetah died in Chhattisgarh in 1947 and it was declared extinct in the country in 1952.
- The **Wildlife Institute of India (WII)** some years back prepared a cheetah reintroduction project.

### *What are the Key Points Related to Cheetahs?*

- **About:**
  - ○ The cheetah is one of the oldest of the big cat species, with ancestors that can be traced back more than five million years to the Miocene era.
  - ○ The cheetah is also the world's fastest land mammal that lives in Africa and Asia.
- **African Cheetah:**
  - ○ **Scientific Name:** *Acinonyx Jubatus*
  - ○ **Characteristics:** They have slightly brownish and golden skin which is thicker than the Asiatic Cheetahs.
    - They have much more prominent spots and lines on their face as compared to their Asian cousins.
  - ○ **Distribution:** Found all over the African continent in thousands of numbers.
  - ○ **Protection:**
    - **IUCN Red List:** Vulnerable.
    - **CITES:** Appendix 1.
    - **WPA:** Schedule-2.
- **Asiatic Cheetah:**
  - ○ **Scientific Name:** *Acinonyx Jubatus Venaticus*
  - ○ **Characteristic:** Slightly smaller than the African Cheetahs.
    - They have pale yellowish fawn coloured skin with more fur under their body, specifically on the belly.
  - ○ **Distribution:** Found only in Iran with less than 100 individuals left.
  - ○ **Protection:**
    - **IUCN Red List:** critically endangered.
    - **CITES:** Appendix 1.
    - **WPA:** Schedule-2.
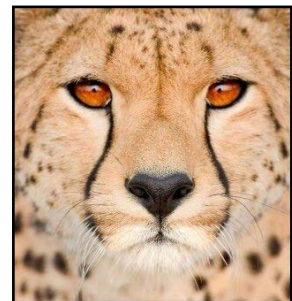
### *What are the Threats?*

- Human-wildlife conflict, loss of habitat and loss of prey, and illegal trafficking.

Note:

drishti

➢ Deforestation and **agriculture eventually led to less forest land and Cheetah habitat.**

➢ The advent of climate change and growing human populations have only made these problems worse.

### What are the Indian Conservation Efforts?

➢ The Wildlife Institute of India had prepared a Rs 260-crore cheetah **Re-introduction project** seven years ago.

➢ This could be the world's first inter-continental cheetah translocation project.

➢ The Ministry of Environment had in the 19th meeting of the **National Tiger Conservation Authority (NTCA)** released an **"Action Plan for Introduction of Cheetah in India".**

➢ The National Tiger Conservation Authority (NTCA) has decided to bring 50 African Cheetah from Namibia within the next 5 years.

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**What are the Key Points of Kuno National Park?**

➢ Kuno National Park of Madhya Pradesh is **one the most unique destinations** for all wildlife lovers and enthusiasts.

➢ It has a **healthy population of chital, sambar, nilgai, wild pig, chinkara and cattle.**

➢ Currently, the leopard and striped hyena are the only larger carnivores within the National Park, with the lone tiger having returned to Ranthambore earlier this year.

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# Biomass Electricity

### Why in News?

Recently, **a new biomass-based boiler technology was launched in India** (Kurukshetra, Haryana) that claims to accommodate all kinds of agricultural residue as fuel and can be greener and may also help reduce the burden of **stubble burning.**

➢ Biomass-based electricity is gaining the attention of regulators and policy makers, as the country moves towards power generation that is not carbon-intensive.

➢ Around 2.6% of the country's electricity demand is met by biomass.

### What are the Key Highlights?

➢ **Features of the Biomass-based Boiler:**

○ The new boiler had **a capacity of 75 tonnes per hour** and generated 1**5 megawatts of electricity.**

○ This new **Denmark-based technology** allows the plant to fire a wide range of fuels with less fuel preparation and handling.

○ This combustion technology is advantageous because of the **vibrating grate.**

○ The grate of a steam boiler supports the solid fuel in the furnace.

● Vibrating grate accommodates **biomass of every density.**

● The moisture content of the fuel, however, has to be 15-20%

○ Since the vibrating grate supports firing agro residue of any size, it **saves energy consumed for processing biomass for energy generation.**

➢ **Advantages over Conventional Boilers:**

○ The existing conventional boilers are designed **only for specific types of agro residue** such as paddy husk, paddy straw, mustard, etc and thus restrict the biomass contribution in energy generation.

○ While vibrating grate boiler technology can be a solution for firing any kind of biomass.

### What is Biomass?

➢ **About**

○ Biomass is renewable organic material that comes from plants and animals.

➢ **Uses**

○ Biomass is used for facility heating, electric power generation, and combined heat and power.

➢ **Methods to convert Electricity:** Biomass can be converted into electric power through several methods.:

○ **Combustion of biomass material:**

● The most common is direct combustion of biomass material, such as agricultural waste or woody materials.

○ **Gasification:**

● Gasification produces a synthesis gas with usable energy content by heating the biomass with less oxygen than needed for complete combustion.

Note:

○ **Pyrolysis:**
  ● Pyrolysis yields bio-oil by rapidly heating the biomass in the absence of oxygen.
○ **Anaerobic digestion:**
  ● Anaerobic digestion produces a renewable natural gas when organic matter is decomposed by bacteria in the absence of oxygen.
    ■ Very wet wastes, like animal and human wastes, are converted into a medium-energy content gas in an anaerobic digester.

➢ **Advantages:**
  ○ Compared to many other renewable energy options, biomass has the advantage of **dispatchability,** meaning it is **controllable and available when needed.**

➢ **Disadvantages:**
  ○ The fuel needs to be procured, delivered, stored, and paid for.
  ○ Also, biomass combustion produces emissions, which must be carefully monitored and controlled to comply with regulations.

➢ **Government Initiatives:**
  ○ **Biomass power & cogeneration programme** is implemented with the main objective of promoting technologies for optimum use of country's biomass resources for grid power generation.
  ○ The Union Ministry of New and Renewable Energy (MNRE) announced **central financial assistance** for projects utilising biomass like bagasse, agro-based industrial residue, crop residues, wood produced through energy plantations, weeds as well as wood waste produced in industrial operations for power generation.
    ● The move was aimed at enhancing biomass combustion in a controlled environment for energy production.

# Painted Leopard Gecko

## Why in News?

Recently, researchers have identified a new colorful species of leopard geckos named *Eublepharis pictus*, also known as the Painted Leopard Gecko, earlier it was thought to belong to a known species.



## What are the Findings?

➢ The new species **differs from all members of the genus Eublepharis except for *E hardwickii.***
  ○ Eublepharis is a genus of terrestrial geckos native to eastern and southwestern Asia.
➢ The new species lives in dry evergreen forests mixed with scrub and meadows. It is strictly **nocturnal, actively foraging along trails in the forest after dusk.**
➢ Researchers had **initially identified the specimen as an East Indian Leopard Gecko** (*Eublepharis hardwickii)*. This new species appears to be common in the forests of Andhra Pradesh and Odisha.
  ○ Geographically the two species **appear to be separated by the Brahmani River.**
➢ The gecko genus Eublepharis **now has 7 species.**
➢ Based on IUCN (International Union for the Conservation of Nature) conservation prioritization criteria, the researchers suggested it to list as Near Threatened (NT).
➢ More research may also encourage better protection of biodiversity in the area. The Eastern Ghats are severely under-surveyed, and dedicated efforts will help recognise it as a biodiversity hotspot.

## What are Geckos?

➢ **About:**
  ○ Geckos are reptiles and are found on all continents except Antarctica. These colorful lizards have adapted to habitats from rainforests, to deserts, to cold mountain slopes.
  ○ Most geckos are nocturnal, which means they are active at night, but day geckos are active during the day and depend on insects, fruits, and flower nectar.
  ○ Geckos are spread across six families: Carphodactylidae, Diplodactylidae, Eublepharidae, Gekkonidae, Phyllodactylidae, and Sphaerodactylidae.

Note:

➢ **Other Species of Gecko in India:**
  ○ Indian Golden Gecko (family Gekkonidae) is native to India (Tamil Nadu, Orissa, Andhra Pradesh). It is listed in **Schedule 1 of WPA (Wildlife Protection Act).**
    ● **IUCN Red List:** Least Concern (LC)
  ○ Tokay Gecko (family Gekkonidae) is widespread in the Indo-Malayan region **Protection Status:**
    ● Schedule 4 of WPA.
    ● IUCN Red List: Least Concern (LC).

# Global Sustainable Development Report, 2022

### Why in News?

Recently, the global Sustainable Development Report, 2022 was released.

➢ India was **ranked 121 out of the 163 countries.** It was ranked 117 in 2020 and 120 in 2021.

➢ Earlier, in February 2022, the Prime Minister addressed the **The Energy and Resources Institute's (TERI) World Sustainable Development Summit.**

### What is a Sustainable Development Report?

➢ **About:**
  ○ It is a **global assessment of countries' progress** towards achieving the **Sustainable Development Goals.**
  ○ It is published by a group of independent experts at the **Sustainable Development Solutions Network (SDSN).**
    ● SDSN was launched in 2012 to **mobilize global scientific and technological expertise** to promote practical problem solving for sustainable development and implement the Sustainable Development Goals (SDGs).
    ● Following their adoption, **SDSN is now committed to supporting the implementation of the SDGs** at national and international levels.

➢ **Ranking:**
  ○ Countries are ranked by **their overall score.**
  ○ The overall score measures the total progress towards achieving all 17 **Sustainable Development Goals (SDG).**

  ○ The score can be interpreted as a **percentage of SDG achievement.**
  ○ A score of 100 indicates that all SDGs have been achieved.

➢ **Performance of the Countries:**
  ○ The 2022 SDG Index is **topped by Finland, followed by three Nordic countries –Denmark, Sweden and Norway**.
  ○ East and South Asia is the region that progressed most on the SDGs since their adoption in 2015.
  ○ Bangladesh and Cambodia are the two countries that progressed most on the SDGs since 2015.
  ○ By contrast Venezuela has declined the most on the SDG Index since their adoption in 2015.

### What are the key Highlights of the Report?

➢ **About World:**
  ○ Multiple and simultaneous health, climate, biodiversity, geopolitical and military crises are major setbacks for sustainable development globally.
  ○ The SDG Index world average has **slightly decreased in 2021 for the second year in a row,** largely due to the impact of the pandemic on SDG1 (No Poverty) and SDG8 (Decent Work and Economic Growth) and poor performance on SDG11-15 (climate, biodiversity, and sustainable urban development goals).
  ○ Besides their **massive humanitarian costs, military conflicts – including the war in Ukraine** – have major international spill overs on food security and energy prices, which are amplified by the climate and biodiversity crises.

➢ **About India:**
  ○ **India's Preparedness Worsened:**
    ● India is **not placed well to achieve the United Nations-mandated Sustainable Development Goals (SDG)** and its preparedness has worsened over the years in comparison with other countries.
  ○ **Major Challenges:**
    ● The country **continues to face major challenges in achieving 11 of the 17 SDGs,** which has pushed down its global ranking on SDG preparedness.
    ● **Ensuring decent work (SDG 8)** has become more challenging.

Note:

- According to the report, India is on track to achieving SDG 13 on climate action.
  - However, **The State of India's Environment, 2022** flagged that the country was facing major challenges in this area.
    - ◆ India's performance on climate action — (SDG) 13 — **has slipped from 2019-2020.**
    - ◆ This decline in India's overall performance is primarily due to eight states — Bihar, Telangana, Rajasthan, Uttar Pradesh, Karnataka, Andhra Pradesh, Punjab and Jharkhand — whose scores have dipped under SDG 13 in the two years.
- ❍ **Progress Made:**
  - The progress in around 10 of these goals is similar to those in 2021.
    - These include SDG 2 on ending hunger, SDG 3 on good health and well being and SDG 6 on clean water and sanitation.

## *What are the Recommendations?*

- ➤ **New partnerships and innovations should be Scaled-up:**
  - ❍ New partnerships and innovations that emerged during the **Covid-19 pandemic,** including in scientific cooperation and data, should be scaled-up to support the SDGs.
- ➤ **Science and Technological Innovations:**
  - ❍ **Science, technological innovations, and data systems can help identify solutions** in times of crises and can provide decisive contributions to address the major challenges of our times.
  - ❍ These call for **increased and prolonged investments in statistical capacities,** Research & Development and education and skills.
- ➤ **Increasing Investment:**
  - ❍ Achieving the SDGs is **fundamentally an investment agenda** in physical infrastructure (including **renewable energy,** digital technologies) and human capital (including health, education).
    - Yet the **poorest half of the world lacks market access to capital** on acceptable terms.
    - Poor and vulnerable countries have been hit hard by the multiple crises and their spill overs.

### What are Sustainable Development Goals (SDG)?

- ➤ The **Sustainable Development Goals (SDGs)** also known as the Global Goals, were **adopted by the United Nations in 2015** as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity.
- ➤ The 17 SDGs are integrated—they recognize that action in one area will affect outcomes in others, and that development must balance social, economic and environmental sustainability.
- ➤ Countries have committed to prioritize progress for those who're furthest behind. The SDGs are designed to end poverty, hunger, **Acquired ImmunoDeficiency Syndrome (AIDS)** and discrimination against women and girls.



## Biomass Co-Firing

### *Why in News?*

Unavailability of Biomass Pellets of agricultural residues is slowing down the implementation of the Ministry of Powers' direction to **Co-Fire biomass with coal** in thermal power plants.

- ➤ The Union Ministry of Power, while presenting the **Union Budget in February 2022**, mandated 5-10 % co-firing at every thermal power plant in the country.
- ➤ Biomass Pellets are a popular type of biomass fuel, generally made from **wood wastes, agricultural biomass, commercial grasses and forestry residues.**

### *What is Biomass Co-firing?*

- ➤ **About:**
  - ❍ Biomass co-firing is **the practice of substituting a part of the fuel with biomass** at **coal thermal plants.**

- ❍ Biomass co-firing stands for adding biomass as a partial substitute fuel in high efficiency coal boilers.
  - ● **Coal and biomass are combusted together in boilers** that have been designed to burn coal. For this purpose, the existing coal power plant has to be partly reconstructed and retrofitted.
  - ● Co-firing is **an option to convert biomass to electricity, in an efficient and clean way**, and to reduce **GHG (Green house Gases) emissions** of the power plant.
  - ❍ Biomass co-firing is **a globally accepted cost-effective method for decarbonising a coal fleet.**
  - ❍ India is a country **where biomass is usually burnt on the field which reflects apathy towards resolving the problem of clean coal** using a very simple solution that is readily available.
- ➤ **Significance:**
  - ❍ Biomass co-firing is an effective way to curb emissions from open burning of crop residue; it also decarbonises the process of electricity generation using coal.
    - ● Substituting 5-7 % of coal with biomass in coal-based power plants **can save 38 million tonnes of carbon dioxide emissions**.
  - ❍ It can help cut emissions from combustion of fossil fuels, address India's burgeoning problem of farm stubble burning to some extent, reduce waste burden while also creating jobs in rural areas.
  - ❍ India has large biomass availability as well as rapid growth in coal-fired capacity.
- ➤ **Challenges:**
  - ❍ Substituting 5-7% of coal with biomass in coal-based power plants can save 38 million tonnes of carbon dioxide emissions, but the existing **infrastructure is not robust enough** to turn this into reality.
  - ❍ Around 95,000-96,000 tonnes of biomass pellets are required per day for co-firing, But **India's pellet manufacturing capacity is 7,000 tonnes per day at present** despite a surplus 228 million tonnes of agricultural residue available in the country.
  - ❍ This huge gap is due to the **seasonal availability and unreliable supply of biomass pellets** to the utility.
  - ❍ It is challenging **to store biomass pellets for long durations at the plant sites since they absorb moisture from air quickly,** rendering them useless for co-firing.

- ❍ Only pellets **with up to 14% of moisture** can be used for combustion along with coal.

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**What are the other Related Intiatives?**
- ➤ **National Mission on use of Biomass in Coal Based Thermal Power Plants**
- ➤ **Carbon Capture and Storage**
- ➤ **Coal Beneficiation**

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## Way Forward

- ➤ Platforms need to be established **to ensure farmers have an intrinsic role in this business model of pellet manufacturin**g and co-firing in power plants.
- ➤ To exploit co-firing potential without adverse environmental impact, **emerging economies need technology and policy preparation.**
- ➤ Sustainability indicators for bioenergy, including protection of soil and water resources, biodiversity, land allocation and tenure, and food prices, **need to be integrated into policy measures.**

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# Kosi River Avulsions

## Why in News?

Recently a research study reported that **instability in Kosi River has been observed after the construction of embankments on either side of it.**

## What are Avulsions?

- ➤ **About:**
  - ❍ Avulsion refers to the **phenomenon of change in the course of river flow** causing the **abandonment of the old established river channel and formation of a new channel.**
- ➤ **Occurrence:**
  - ❍ Rivers lining **tropical and desert regions are more prone** to avulsions.
  - ❍ Avulsions **occur less frequently**, only once a decade or century, or even less.
  - ❍ The rare occurrence of avulsions makes them **less discussed despite their catastrophic effects as compared to more frequent extreme weather events** and the continuous effect of sea-level rise.

*What are the Key Findings
of the Research Study?*

➢ **Global Scenario:**

   ○ **113 avulsions** have been documented worldwide as per the satellite imagery from **1973-2020** and historical maps.

   ○ Rivers **altered routes in the mountain bases while descending onto unconfined valleys or open oceans in 33 instances.**

      ● **Kosi river falls** under this category.

   ○ The change **can also occur in the delta regions.** One is along backwater zones, part of the river that flows differently because of the effects of the downstream sea.

   ○ Along some of the world's largest waterways, such as the Orinoco, Yellow, Nile and Mississippi Rivers, **50 instances occurred on low sloping deltas.**

   ○ In 30 instances, **avulsions occurred in rivers with extreme sediment load.** River beds are filled-up with the sediments causing the rivers to seek new channels during floods.

➢ **Case-study of Kosi River:**

   ○ **Kosi-like systems** bring a **lot of sediments from the Himalayas.** After **embankments were made on either side of the river in the 1950s, it became much more unstable.**

   ○ **In 2008,** a large flood **forced the Kosi River to leave its established channel** for an older one. As a result, **3 million people were displaced and more than 250 human lives were claimed.**

   ○ Kosi river avulsions are **not at all natural. The 200 km stretch** where the river used to distribute sediments before the embankment-construction has now been **reduced to 10 km.**

   ○ Though the course of sediment-flow has not altered, **the area available for its movement has contracted.**

   ○ Only **a false perception of protection** is created due to temporary solutions like **embankments.** Instead, these **aggravate system-scale degradation by limiting natural sediment dispersal.**

**What is the Kosi River System?**

➢ The **Kosi** is a **trans-boundary river** which flows through **Tibet, Nepal and India.**

➢ It has its **source in Tibet** that includes the **world's highest upland;** it then **drains a large part of Nepal before emerging onto the Gangetic plains.**

➢ Its **three major tributaries, the Sun Kosi, Arun and Tamur** meet at one point just upstream of a 10 km gorge cut through the **Himalayan foothills.**

➢ The river crosses into **northern Bihar, India** where it branches into distributaries before joining the **Ganges near Kursela in Katihar district.**

➢ The Kosi carries **the maximum amount of silt and sand after the Brahmaputra in India.**

➢ It is also known as the **"Sorrow of Bihar"** as the annual floods affect about 21,000 sq. km. of fertile agricultural lands thereby disturbing the rural economy.



# Tracking SDG 7

*Why in News?*

Recently, the **Tracking SDG 7 – The Energy Progress Report 2022** was released which showed that the **Russia-Ukraine war** and **Covid-19 crisis** have **considerably slowed down efforts towards attaining the Seventh Sustainable Development Goal (SDG 7) target**.

➢ The **Energy Progress Report is a product of close collaboration among the five SDG 7 custodian agencies** in the form of a specially constituted Steering Group:

Note:

○ **International Energy Agency (IEA)**, **International Renewable Energy Agency (IRENA)**, **United Nations Statistics Division (UNSD)**, **World Bank**, **World Health Organization (WHO).**

➢ SDG 7 has a target of universal access to clean and affordable energy by 2030.

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**Note**

➢ The annual SDG 7 tracking report includes the official dashboard of global, regional and national progress on **four key energy targets:**

  ○ **7.1:** Ensuring universal access to electricity and clean cooking solutions;

  ○ **7.2:** Substantially increasing the share of renewable energy;

  ○ **7.3:** Doubling progress on energy efficiency;

  ○ **7.A:** Increasing international collaboration in support of clean and renewable energy.

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## *What are the Findings?*

➢ **Access to electricity (7.1):**

  ○ The share of the world's population with access to electricity **rose from 83% in 2010 to 91% in 2020**, increasing the number of people with access by 1.3 billion globally.

  ○ The number **without access declined from 1.2 billion people in 2010 to 733 million in 2020.**

  ○ However, the **pace of progress in electrification has slowed in recent years** which may be explained by the increasing complexity of reaching more remote and poorer unserved populations and the **unprecedented impact of the Covid-19 pandemic.**

    ● At current rates of progress, the **world will reach only 92% electrification by 2030.**

➢ **Clean cooking (7.1):**

  ○ The share of the global population with **access to clean cooking fuels and technologies rose to 69% in 2020,** an increase of 3% points over last year 2021.

  ○ However, **population growth outpaced much of the gains in access, particularly in Sub-Saharan Africa.**

  ○ As a result, the total number of people lacking access to clean cooking has remained relatively stagnant for decades. The increase was primarily driven by advancements in access to large, populous countries in Asia.

➢ **Renewables (7.2):**

  ○ While the share of renewable capacity expansion rose by a record amount in 2021, the positive global and regional trajectories mask the fact that **countries where new capacity additions lagged were those most in need of increased access.**

  ○ Moreover, rising commodity, energy and shipping prices, as well as restrictive trade measures, have **increased the cost of producing and transporting solar photovoltaic (PV) modules, wind turbines, and biofuels,** adding uncertainty for future renewable energy projects.

➢ **Energy efficiency (7.3):**

  ○ SDG 7.3 aims to double the global rate of annual improvement in primary energy intensity—the amount of energy used per unit of wealth created—to 2.6% in 2010–30 versus 1990–2010.

  ○ From 2010 to 2019, global annual improvements in energy intensity averaged around 1.9%, well below the target.

| INDICATOR | 2010 | LATEST YEAR |
|---|---|---|
| 7.1.1 proportion of population with access to electricity | **1.2 billion** people without access to electricity | **733 million** people without access to electricity (2020) |
| 7.1.2 Proportion of population with primary reliance on clean fuels and technology for cooking | **3 billion** people without access to clean cooking | **2.4 billion** people without access to clean cooking (2020) |
| 7.2.1 Renewable energy share in total final energy consumption | **16.1%** share of total final energy consumption from renewables | **17.7%** share of total final energy consumption from renewables (2019) |
| 7.3.1 Energy intensity measured as a ratio of primary | **5.6 MJ/USD** primary energy intensity | **4.7 MJ/USD** primary energy intensity (2019) |
| 7.a.1 International financial flows to developing countries in support of clean energy research and development and renewable energy | **11.2 USD billion** international financial flows to developing countries in support of clean energy | **10.9 USD billion** international financial flows to developing countries in support of clean energy (2019) |

➢ **International Financial Flows (7.A):**

  ○ International public financial flows to developing countries in support of clean energy **decreased**

**for the second year in a row,** falling to USD 10.9 billion in 2019, **despite the immense needs for sustainable development in most countries and growing urgency of climate change.**

○ Overall, the level of **financing remains below what is needed to reach SDG 7,** particularly in the most vulnerable and least developed countries.

### *What are the Recommendations?*

➢ **Access to Electricity:** Meeting the 2030 target requires i**ncreasing the number of new connections to 100 million a year.**

➢ **Clean Cooking:** A multisectoral, coordinated effort is needed to achieve the SDG 7 target of universal access to clean cooking by 2030.

○ It is critical that the **global community learns from the successes and challenges faced by countries** that have attempted to design and implement clean household energy policies.

➢ **Renewables:** Ensuring universal access to affordable, reliable, sustainable, and modern energy implies accelerated deployment of renewable energy sources for electricity, heat, and transport.

○ Renewable shares need to reach well over 30% of 'total final energy consumption' by 2030, up from 18% in 2019, to be on track for reaching net-zero energy emissions by 2050.

➢ **Energy Efficiency:** The rate of energy efficiency needs to be higher—consistently over 4% for the rest of this decade—if the **world is to reach net-zero emissions** from the energy sector by 2050.

➢ **International Financial Flows:** Energy efficiency policies and investment need to be scaled up significantly to bring the SDG 7.3 target within reach.

■■■

Note:

# History

## Highlights

- *Maya Technique of Maize Fortification*

# Maya Technique of Maize Fortification

### *Why in News?*

A study has thrown light on how **Maya people** fortified their maize with the chemical process known as' **nixtamalisation**' and also built indoor toilets in pits they dug into the limestone bedrock of the **Yucatan peninsula in Mesoamerica.**



Legend:
--- Modern Country Borders
Extent of Mayan Civilization

### *Who were the Mayas?*

➢ The Maya are an **indigenous people of Mexico and Central America** who have continuously inhabited the lands comprising modern-day Yucatan, Quintana Roo, Campeche, Tabasco, and Chiapas in Mexico and southward through Guatemala, Belize, El Salvador and Honduras.

   ❍ The Maya are probably the best-known of the classical civilizations of Mesoamerica.

➢ The Maya civilization **originated in the Yucatan Peninsula.** Known for its monumental architecture and an advanced understanding of mathematics and astronomy.

➢ The rise of the Maya began about 250 CE, and what is known to archaeologists as the Classic Period of Mayan culture **lasted until about 900 CE**. At its height, Mayan civilization **consisted of more than 40 cities, each with a population between 5,000 and 50,000.**

   ❍ But then, suddenly, between 800 and 950 CE, many of the southern cities were abandoned. This period is called the collapse of the Classic Maya civilisations, puzzling modern-day scientists.

➢ **Special Features**:

   ❍ As early as 1500 BCE the Maya had settled in villages and had developed an agriculture based on the cultivation of **corn (maize), beans, and squash; by 600 CE cassava (sweet manioc)** was also grown.

   ❍ They began to build **ceremonial centres**, and by 200 CE these had developed into cities containing temples, pyramids, palaces, courts for playing ball, and plazas.

   ❍ The **ancient Maya quarried immense quantities of building stone** (usually limestone), which they cut by using harder stones such as chert. They practiced mainly slash-and-burn agriculture, but they used advanced techniques of irrigation and terracing. They also **developed a system of hieroglyphic writing and highly sophisticated calendrical and astronomical systems.**

   ❍ The Maya made paper from the inner bark of wild fig trees and wrote their hieroglyphs on books made from this paper. Those books are called **codices.**

   ❍ The Maya also developed an elaborate and beautiful tradition of **sculpture and relief carving.**

   ❍ **Architectural works and stone inscriptions** and reliefs are the chief sources of knowledge about the early Maya.

Note:

### *What is the Nixtamalisation Technique used by Mayas?*

➢ Nixtamalisation is a method by which the ancient peoples of Mesoamerica like the Maya **used to soak and cook their maize in an alkaline solution** and make it more palatable, nutritious and non-toxic. *Nixtamal* is derived from the Nahuatl word *nextamalli*, meaning 'nixtamalised maize dough'.

➢ Maize is the primary crop of the Americas and has been cultivated in the region for millennia. Maize, beans and squash are called the 'Three Sisters' and formed the basis of diets throughout pre-Columbian North and Mesoamerica.

➢ The researchers noted that the key **reason for the spread of maize** in the **Americas** was nixtamalisation.

➢ The process ensures that the maize contains amino acids, calcium and **Vitamin B2,** which can be utilised by the human body. It also eliminates certain mycotoxins (**toxins produced by certain moulds (fungi) and can be found in food)** present in maize.

➢ Without this treatment, maize-dependent populations were at elevated risk of **pellagra** (Vitamin B2 deficiency), calcium deficiency and mycotoxin poisoning.

➢ *Nejayote,* wastewater from nixtamalisation, may have been **used to lime the chultunes** while they were used as latrines. This was done to **control odours and inhibit insect** and microorganism growth like it is done today.

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# Geography

## Unified Geologic Map of the Moon

### Why in News?

Recently, the **United States Geological Survey (USGS)** in partnership with **National Aeronautics and Space Administration (NASA)** and the Lunar Planetary Institute has released a new comprehensive map of the Moon, called the **'Unified Geologic Map of the Moon'.**

➢ The **new map showcases the Moon in a 1:50,00,000-scale size,** and is claimed to come handy to researchers, scientists, students and the general public.

➢ The map has been **created with the help of the information gathered** from six **Apollo-era regional maps**.

  ❍ It also uses data from **recently held satellite missions to the Moon.**

### What is the Significance of this New Map?

➢ **Blueprint for Future Human Mission:**
  ❍ This new map will serve as the "**definitive blueprint of the Moon's surface geology for future human missions."**

➢ **Help in understanding the Moon Surface:**
  ❍ It will come handy to **understand the surface of the Moon.**
  ❍ The map will also **help researchers learn the history behind the formations** located on the Moon's surface.
    - Earlier, a leftover piece of a spacecraft flying (of Chang'e 5-T1 – a lunar mission of China) through space reportedly hit the surface of the moon creating a new crater that may be around 65 feet wide (**lunar crater**).

### What are the key Highlights about the Moon?

➢ **About:**
  ❍ The Moon is **Earth's only natural satellite** and the fifth largest moon in the solar system.
  ❍ The Moon's presence **helps stabilize our planet's wobble** and moderate our climate.
  ❍ The Moon's distance from Earth is about 240,000 miles.
  ❍ The Moon has a **very thin atmosphere called an exosphere.**

➢ **Phases of the Moon:**
  ❍ The Moon displays four main phases: new, first quarter, full, and last quarter.
    - **New Moon:** It occurs when the **Moon is between Earth and the Sun**, and thus the side of the Moon that is in shadow faces Earth.
    - **Full Moon:** It occurs when the **Moon is on the opposite side of Earth from the Su**n, and thus the side of the Moon that is illuminated faces Earth.
    - **First and Last Quarter:** In this phase, half the Moon appears illuminated, occurring when the Moon is at a right angle with respect to the Sun when viewed from Earth. (Earth, as seen from the Moon, shows the same phases in opposite order—e.g., Earth is full when the Moon is new.)

➢ **Related Missions:**
  ❍ **Chandrayaan-3 Mission (India)**
  ❍ **Artemis I moon mission (USA)**
  ❍ **Chang'e-5 Mission (China)**

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# Art and Culture

## Highlights

● *Sant Tukaram*

## Sant Tukaram

### *Why in News?*

➢ Recently, Prime Minister inaugurated the **Sant Tukaram Shila Mandir** in the temple town of **Dehu in the Pune district.**

  ○ Shila Mandir is a temple dedicated to a slab of stone (shila) on which Sant Tukaram meditated for 13 days.

   ● **Shila** refers to a rock that is currently on the Dehu Sansthan temple premises, and that for centuries has been the starting point of **Wari**, the **annual pilgrimage to Pandharpur.**

  ○ The rock where he sat for 13 days is considered pious and a **place of pilgrimage for the wakari sect**.

### *Who was Sant Tukaram?*

➢ **About:**

  ○ Sant Tukaram was a **Warkari saint and poet.**

   ● The sect is spread **across Maharashtra** and Sant Tukaram and his works are central to it.

  ○ He was famously known for **Abhanga devotional poetry** and community-oriented worship through **spiritual songs known as Kirtans.**

  ○ Also, composed a **Marathi genre of literature called Abhanga poetry** which fused folk stories with **spiritual themes.**

➢ **His Philosophy:**

  ○ Tukaram mentions four more people in his Abhangas work who had a major influence on his spiritual development: the previous **Bhakti Sants Namdev**, Dnyaneshwar, **Kabir**, and Eknath.

  ○ Tukaram's teachings were regarded as **Vedanta-based.**

➢ **Social Reform:**

  ○ His message about a **casteless society and his denial of rituals** had led to a **social movement**.

  ○ His Abhangs became the strong weapon against the **Brahmanical dominance of society.**

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# Security

## Highlights

- EX SAMPRITI-X
- Ex Khaan Quest 2022
- 38th India-Indonesia CORPAT
- Astra Mk-1 Missile
- SIPRI Yearbook 2022

## EX SAMPRITI-X

### Why in News?

A joint military training exercise **Ex SAMPRITI-X between India and Bangladesh** is being conducted at Jashore Military Station in Bangladesh from 5th to 16th June 2022.



### What are the Key Highlights about the Ex SAMPRITI-X?

➤ **About:**
  ○ SAMPRITI is an **important bilateral defence cooperation** endeavour conducted alternately by both countries which **aims to strengthen and widen the aspects of interoperability** and cooperation between both the armies.

➤ **Aim:**
  ○ To **strengthen interoperability between the two armies** and to understand each other's tactical drills and operational techniques.

➤ **Representation by India:**
  ○ The Indian contingent of company strength is being represented by a **Battalion of the DOGRA Regiment**.

➤ **Significance:**
  ○ During the joint military exercise, **armies of both the Nations will share expertise in multiple simulated scenarios** of **Counter Terrorism**, Humanitarian Assistance & Disaster Relief and **UN Peacekeeping Force** under **United Nations** mandate.
  ○ The **participants will gain an understanding of each other's organisational structure** and tactical exercises.

### What are the Other Military Exercises by India?

| Joint Military Exercises of India with Other Countries | |
|---|---|
| **Name of Exercise** | **Country** |
| Garuda Shakti | Indonesia |
| Ekuverin | Maldives |
| Hand-in-Hand | China |
| Kurukshetra | Singapore |
| Mitra Shakti | Sri Lanka |
| Nomadic Elephant | Mongolia |
| Maitree Exercise | India & Thailand |
| Vajra Prahar | India & US |
| Yudh Abhyas | India & US |
| Shakti Exercise | India & France |
| Dharma Guardian | India & Japan |
| Surya Kiran | India & Nepal |
| SIMBEX | India & Singapore |
| Exercise LAMITYE | India & Seychelles |

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# Ex Khaan Quest 2022

## *Why in News?*

A Multinational Peacekeeping exercise **"Ex Khaan Quest 2022"** featuring participation from military contingents from 16 countries **has commenced in Mongolia**.

➢ **Indian Army** is represented by a contingent from the **Ladakh Scouts**.

➢ **Nomadic Elephants** is the other Military Exercise which is Conducted between the two Countries.



## *What is the Ex Khaan Quest?*

➢ Khaan Quest 2022 is a **multinational peacekeeping operations exercise conducted in Mongolia.**

  ❍ It consists of a **United Nations Peacekeeping Mission** command post exercise, a UN PKO (PeaceKeeping Operation) Mission field training exercise, at the Mongolian Armed Forces' Five Hills Training Area.

➢ The exercise is designed to **improve peacekeeping capabilities, strengthen military-to-military relationships and enhance the core UN doctrine PKO competencies** of all participants.

  ❍ The 2008 doctrine re-confirms and provides a contemporary understanding of how practitioners might apply the UN's three basic peacekeeping principles, namely: consent, impartiality and non-use of force, except in self-defence and defence of the mandate.

➢ The exercise will also **enable sharing of best practices between the Armed Forces of participating nations** and will include field training exercises, combat discussions, lectures and demonstration.

➢ The military exercise will **enhance the level of defence co-operation between Indian Army and participating countries** especially with the Mongolian Armed Forces which will enhance bilateral relations between the two countries.

# 38ᵗʰ India-Indonesia CORPAT

## *Why in News?*

The **38ᵗʰ India-Indonesia Coordinated Patrol** (IND-INDO CORPAT) is being conducted in the **Andaman Sea and Straits of Malacca.**



## *What are the Key Highlights?*

➢ **About:**

  ❍ The two Navies have been carrying out **CORPAT along their International Maritime Boundary Line (IMBL) since 2002.**

  ❍ It highlights the mutual trust, synergy and cooperation between the two friendly Navies.

  ❍ India and Indonesia have enjoyed especially close relations, covering a wide spectrum of activities and interactions which have strengthened over the years.

➢ **Aim:**

  ❍ It is aimed at keeping the **Indian Ocean Region** safe and secure for commercial shipping, international trade and conduct of legitimate maritime activities.

  ● As part of Government of India's vision of **SAGAR (Security And Growth for All in the Region),** the Indian Navy has been proactively engaging with countries in the Indian Ocean Region for

Note:

coordinated patrols, cooperation in **Exclusive Economic Zone (EEZ)** surveillance, **passage exercises** and bilateral/multilateral exercises.

- ❍ CORPATs help build understanding and interoperability between navies, and facilitate institution of measures to prevent and suppress Illegal Unreported Unregulated (IUU) fishing, **drug trafficking,** maritime terrorism, armed robbery and piracy.

➢ **Other Exercises between India and Indonesia:**
- ❍ **Samudra Shakti:** A bilateral maritime exercise.
- ❍ **Garuda Shakti:** A joint military exercise.

# Astra Mk-1 Missile

## *Why in New?*

Recently, the Ministry of Defence has signed a contract with the Hyderabad-based public-sector Bharat Dynamics Ltd (BDL) for supply of the **Astra Mark-1.**

➢ Contract was signed at a **cost of Rs 2,971 crore,** for deployment on fighter jets of the Indian Air Force and Indian Navy.



## *What are the Astra Missile and its Variants?*

➢ The Astra project was **officially launched in the early 2000s** with defined parameters and proposed future variants.

➢ Around 2017, the development phase of the Mk-1 version was complete.
- ❍ Several successful tests have been conducted since 2017 from Sukhoi-30 MKIs.

## *What are the Key Highlights of the Astra Mk-1 Missile?*

➢ **About:**
- ❍ The Astra Mk-1 is a **Beyond Visual Range (BVR)**, Air-to-Air Missile (AAM).

- BVM missiles are **capable of engaging beyond the range of 20 nautical miles** or 37 kilometers.
- AAMs are fired from an airborne asset to destroy an airborne target.

➢ **Range:**
- ❍ The range for **Astra Mk-1 is around 110 km.**
- ❍ The Mk-2 with a **range over 150 km** is under development and Mk-3 version with a longer range is being envisaged.
  - One more version of Astra, with a range smaller than Mk-1 is also under development.

➢ **Designed and Developed by:**
- ❍ **Defence Research and Development Organisation (DRDO)**

## *What is the Strategic Significance?*

➢ **Reduce Dependency on Foreign Sources:**
- ❍ The missile has been designed based on requirements specified by the **Indian Air Force (IAF)** for BVR as well as close-combat engagement, reducing the dependency on foreign sources.
  - AAMs with BVR capability provides **large stand-off ranges to own fighter aircraft** which can neutralise adversary airborne assets without exposing themselves to adversary air defence measures.
    - Stand-off range means the **missile is launched at a distance sufficient** to allow the attacking side to evade defensive fire from the target.

➢ **Technologically and Economically Superior:**
- ❍ Astra is **technologically and economically superior to many** such imported missile systems.
- ❍ The missile can **travel at speeds more than four times that of sound** and can reach a maximum altitude of 20 km, making it extremely flexible for air combat.

➢ **Can be Integrated with other Fighter Aircraft:**
- ❍ The missile is fully **integrated on the Sukhoi 30 MKI I** and will be integrated with other fighter aircraft in a phased manner, including the **Light Combat Aircraft (LCA) Tejas.**
- ❍ It will **integrate the missile on the MiG-29K fighter aircraft** which are deployed on the Navy's aircraft carriers, thus adding to the lethality of India's Aircraft carriers.
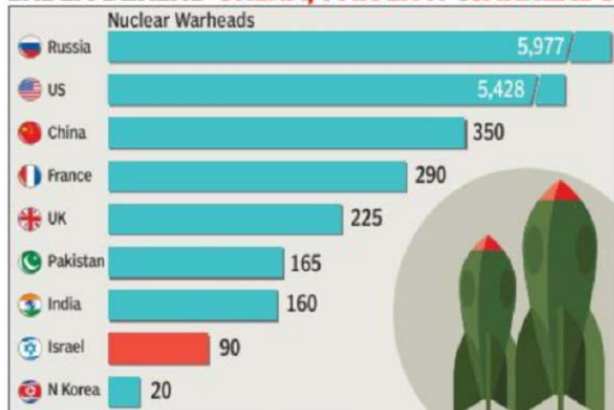
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# SIPRI Yearbook 2022

## *Why in News?*

Recently, the **Stockholm International Peace Research Institute (SIPRI)** launched the findings of SIPRI Yearbook 2022, which assesses the current state of armaments, disarmament and international security.



**INDIA BEHIND CHINA, PAK IN N-WARHEADS**

Nuclear Warheads

| | |
|---|---|
| Russia | 5,977 |
| US | 5,428 |
| China | 350 |
| France | 290 |
| UK | 225 |
| Pakistan | 165 |
| India | 160 |
| Israel | 90 |
| N Korea | 20 |

**What is SIPRI?**
- The SIPRI is an **independent international institute** dedicated to research into conflict, armaments, arms control and disarmament.
- **Established in 1966 at Stockholm**, SIPRI provides data, analysis and recommendations, based on open sources, to policymakers, researchers, media and the interested public.

## *What are the Key Highlights?*

- **Nuclear warheads:**
  - **Global Scenario:**
    - The nine nuclear-armed states—**the United States, Russia, the United Kingdom, France, China, India, Pakistan, Israel and the Democratic People's Republic of Korea (North Korea)**—continue to modernize their nuclear arsenals and **although the total number of nuclear weapons declined slightly between January 2021 and January 2022**, the number will **probably increase in the next decade.**
  - **India**
    - India had **160 nuclear warheads** as of January 2022 and it appears to be expanding its nuclear arsenal.

- Nuclear warheads are the explosive head of a missile or torpedo that uses nuclear energy.
  - India's nuclear stockpile increased from 156 in January 2021 to 160 in January 2022.
  - **China**
    - **China** had **350 nuclear warheads** in January 2021 as well as January 2022.
      - India does not share official data on its nuclear arsenal.
  - **Russia and the USA** together possess over **90%** of all nuclear weapons.

- **Importers of Major Arms:**
  - SIPRI identified 164 states as importers of major arms in 2016-20.
  - **Country Wise:**
    - The five largest arms importers were **Saudi Arabia, India, Egypt, Australia and China,** which together accounted for 36% of total arms imports.
  - **Region wise:**
    - The region that received the largest volume of major arms supplies in 2016-20 was Asia and Oceania, accounting for 42% of the global total, followed by the Middle East, which received 33%.

- **Suppliers of Major Arms:**
  - The five largest suppliers in 2016-20 - the **United States, Russia, France, Germany and China** - accounted for 76% of the total volume of exports of major arms.

## *What are the Several Landmarks in the Nuclear Diplomacy?*

- **Treaty on the Prohibition of Nuclear Weapons (TPNW):**
  - After receiving the required 50 ratifications, the **Treaty on the Prohibition of Nuclear Weapons (TPNW)** entered into force in January 2021.

- **New START:**
  - US-Russian arms control agreement New START was extended for five years.

- **Joint Comprehensive Plan of Action (JCPOA):**
  - The start of talks on the USA rejoining, and Iran returning to compliance with the Iran nuclear deal, the **Joint Comprehensive Plan of Action (JCPOA).**

Note:

➢ **Treaty on the Non-Proliferation of Nuclear Weapons:**
  ○ Nuclear-armed permanent members (P5) of the **United Nations Security Council** reaffirmed their commitment to complying with non-proliferation, disarmament, and arms control agreements and pledges as well as their obligations under the 1968 Treaty on the Non-Proliferation of Nuclear Weapons.

### *What are the Hindrances in Nuclear Diplomacy?*

➢ All P5 members **continue to expand or modernize their nuclear arsenals** and appear to be increasing the salience of nuclear weapons in their military strategies.

➢ Russia has **even made open threats** about possible nuclear weapon use in the context of the war in Ukraine.

➢ **Bilateral Russia–USA strategic stability talks have stalled because of the war**, and none of the other nuclear-armed states are pursuing arms control negotiations.

➢ Moreover, the **P5 members of UNSC have voiced opposition to the TPNW**, and the JCPOA negotiations have not yet reached a resolution.
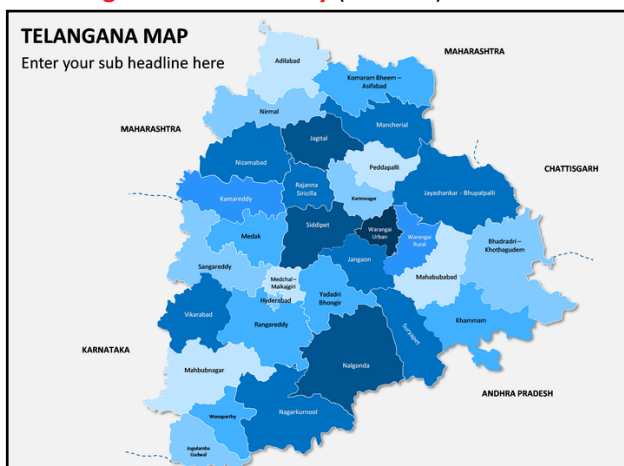
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# Miscellaneous

## Highlights

## Telangana Formation Day

### Why in News?

Telangana's Governor greeted the people of the state on **Telangana formation day** (2nd June).

**TELANGANA MAP**
Enter your sub headline here

### What are the Key Points about Telangana?

➤ **About:**
  ○ On 2nd June, 2014 the northwestern part of Andhra Pradesh was separated and 29th state Telangana was created.
  ○ The **Andhra State Act (1953)** formed the first linguistic state of India, known as the state of Andhra, by taking out the Telugu speaking areas from the State of Madras (now Tamil Nadu).
  ○ The **States Reorganisation Act (1956)** merged the Telugu-speaking areas of Hyderabad state with the Andhra state to create the enlarged Andhra Pradesh state.
  ○ The **Andhra Pradesh Reorganisation Act (2014)** bifurcated Andhra Pradesh into two separate states, namely, the **Andhra Pradesh (residuary)** and the **Telangana.**

➤ **Capital:**
  ○ Hyderabad

➤ **Borders:**
  ○ Telangana is surrounded by Maharashtra and Chhattisgarh in the North, Karnataka in the West and Andhra Pradesh in the South and East directions.

➤ **Four Icons of Telangana:**
  ○ **State Bird** - Palapitta (Indian Roller or Blue Jay).
  ○ **State Animal** - Jinka (Deer).
  ○ **State Tree** - Jammi Chettu (Prosopis Cineraria).
  ○ **State Flower** - Tangedu (Tanner's Cassia).

➤ **Popular Festivals:**
  ○ The Hindu festivals like **Ugadi, Srirama Navami, Bonalu, Vinayaka Chaturthi, Dasara, Deepavali, Sankranti, Holi, Mahashivaratri** are celebrated with pomp, gaiety and devotion.
  ○ **Dasara** is the main festival with the epithet 'pedda panduga'.

➤ **Global Recoginition:**
  ○ **Ramappa Temple,** at Mulugu district presents the distinct style of Kakatiyas. The foundation of this temple is **"sandbox technique".** It is a **UNESCO World Heritage Site.**
  ○ Sadarmatt anicut across river Godavari in Nirmal district and Pedda Cheruvu in Kamareddy district are in the **ICID Register of Heritage Irrigation Structures.**

➤ **National Parks:**
  ○ Kasu Brahmananda Reddy National Park
  ○ Mahavir Harina Vanasthali National Park
  ○ Mrugavani National Park

➤ **Wild Life Sanctuaries:**
  ○ Kinnersani Wildlife Sanctuary
  ○ Eturnagaram Wildlife Sanctuary

- ○ **Kawal Tiger Reserve**
- ○ Lanja Madugu Siwaram Wildlife Sanctuary
- ○ Manjeera Crocodile Wildlife Sanctuary
- ○ **Nagarjuna Sagar-Srisailam** Wildlife Sanctuary
- ○ **Pakhal** Wildlife Sanctuary
- ○ **Pocharam** Wildlife Sanctuary
- ○ **Pranahita** Wildlife Sanctuary
- ➢ **Water Dispute:**
  - ○ **Krishna River Dispute**
- ➢ **Other Related Initiative:**
  - ○ Telangana approved the use of the **Indian Council of Medical Research (ICMR) devised Drone-Based Vaccine Delivery Model, i-drone** for delivering vaccines in remote areas.

# Nanhi Pari Programme

## *Why in News?*

Recently, the **'Nanhi Pari' Programme** was launched by the **Northwest Delhi district administration.**

## *What is Nanhi Pari Programme?*

- ➢ **About:**
  - ○ 'Nanhi Pari' is **a scheme to provide a one-stop solution to parents, eliminating their need to visit various offices to obtain documents.**
- ➢ **Objectives:**
  - ○ The basic aim of most of these schemes is **to protect the birth of the girl child, and to facilitate a safe and secure environment and education for her.**
  - ○ The programme aims **to complete essential services such** as provision of a **birth certificate**, **Aadhaar card registration**, and opening a bank account for girls delivered in government hospitals in the district before mother and baby are discharged.
  - ○ It aims t**o get registration for schemes for girl children and mothers** such as the **Sukanya Samriddhi Account scheme**, the **Ladli scheme**, and **Pradhan Mantri Matru Vandana Yojana** done at the hospital itself.
  - ○ Apart from ensuring that schemes reach target beneficiaries and protecting the interests of girl children, the programme also aims to promote **Institutional Deliveries.**

- ➢ **Significance:**
  - ○ It makes the processes for schemes **as simple as possible for all children and mothers.**
  - ○ Parents would not have to go from here to there, trying to avail themselves of essential schemes.

**What is Institutional Delivery?**
- ➢ It means giving birth to a child in a medical institution **under the overall supervision of trained and competent health personnel**.
- ➢ It also signifies **an availability of amenities to handle the situation** and save the life of the mother and child.

# QS World University Ranking 2023

## *Why in News?*

Recently, QS World University Ranking 2023 was released.

**What is QS World University Rankings?**
- ➢ **Quacquarelli Symonds (QS)** a **leading global career and education network f**or ambitious professionals looking to further their personal and professional development.
- ➢ QS develops and successfully implements methods of comparative data collection and analysis used to highlight institutions' strengths.
- ➢ The 'QS World University Rankings' is an **annual publication** of university rankings which comprises the global overall and subject rankings.
- ➢ **Six parameters** and their weightage for the evaluation:
  - ○ Academic Reputation (40%)
  - ○ Employer Reputation (10%)
  - ○ Faculty/Student Ratio (20%)
  - ○ Citations per faculty (20%)
  - ○ International Faculty Ratio (5%)
  - ○ International Student Ratio (5%)

## *What are Key Highlights of the Report?*

- ➢ **Global Rankings:**
  - ○ **Top Ranks:**
    - ● **Massachusetts Institute of Technology (MIT)** of the US is the top university for the **11th consecutive year.**

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- The second place went to the **University of Cambridge**, followed by **Stanford University**

➢ **Indian Institutions:**

○ The Indian Institute Science (IISC) was ranked highest followed by IIT Bombay and IIT Delhi. The total number of Indian institutes among the top 1,000 globally has **risen to 27 from 22.**

| INDIA'S BEST |||
|---|---|---|
| Top Indian institutes in QS World University Rankings 2023 |||
| 2023 | Institute | 2022 |
| 155 | IISc Bangalore | 186 |
| 172 | IIT Bombay | 177 |
| 174 | IIT Delhi | 185 |
| 250 | IIT Madras | 255 |
| 264 | IIT Kanpur | 277 |
| 270 | IIT Kharagpur | 280 |
| 369 | IIT Roorkee | 400 |
| 384 | IIT Guwahati | 395 |

- **IISc Bengaluru** is the **world's top research university,** achieving a perfect score of 100/100 for this metric.
- Furthermore, **IISc Bengaluru is the fastest rising South Asian university** among the QS World University Rankings top-200.

○ Overall, Indian education institutes, **41 of which made it to the rankings, have performed poorly across many key metrics**.

- For instance, 30 out of 41 ranked universities have suffered declines in the Faculty Student Ratio (FSR) indicator, with only four recording improvements.

○ The report shows that India's presence in the top 500 category is also IIT-driven like other IITs around the world.

- Apart from IISc, eight IITs (Delhi, Bombay, Madras, Kanpur, Kharagpur, Roorkee, Guwahati, Indore) are ranked among the top 500 globally.
- **No other Indian university, public or private, has found a place** in the top 500 category globally, since the launch of the Institute of Eminence scheme.

### What are the Related Indian Initiatives?

➢ **Institutions of Eminence (IoE) Scheme:**

○ It is a government's scheme to provide the **regulatory architecture for setting up or upgrading of 20 Institutions** (10 from public sector and 10 from the private sector) as world-class teaching and research institutions called 'Institutions of Eminence'.

➢ **National Education Policy, 2020:**

○ It aims to introduce several changes in the Indian education system - from the school to college level and **make India a global knowledge superpower.**

➢ **Impacting Research Innovation and Technology (IMPRINT):**

○ It is a first-of-its-kind Pan-IIT and IISc joint initiative to **develop a new education policy and a roadmap for research to solve major engineering and technology challenges** that India must address and champion to enable, empower and embolden the nation for inclusive growth and self-reliance.

➢ **Uchhatar Avishkar Yojana (UAY):**

○ It was announced with a view to promote innovation of a higher order that directly impacts the needs of the Industry and thereby improves the competitive edge of Indian manufacturing.

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# Statehood Day of Goa

### Why in News?

On the **Statehood Day of Goa** (30th May), the Prime Minister greeted the people of the state.

## *What are the Key Highlights about Goa?*

➢ **About:**
  ○ Goa is located on the **southwestern coast of India** within the region known as the Konkan, and geographically separated from the Deccan highlands by the **Western Ghats.**

➢ **Capital:**
  ○ Panji.

➢ **Official Language:**
  ○ **Konkani** which is one of the 22 languages from the **Eight Schedule.**

➢ **Borders:**
  ○ It is surrounded by **Maharashtra to the north and Karnataka to the eas**t and south, with the Arabian Sea forming its western coast.

➢ **History:**
  ○ As India gained independence on 15th August, 1947, it requested the Portugese to cede their territories. However, Portuguese refused.
  ○ In 1961, Indian Government launched **Operation Vijay** and annexed Daman and Diu islands and Goa with the Indian mainland.

  ● **Goa Liberation Day** is observed on 19th December every year in India.
  ● It can be noted that the Portuguese were the first Europeans to come to India (1498) and were also the last to leave this land (1961).
  ○ On 30th May, 1987, the territory was split and Goa was formed. Daman and Diu remained Union Territory.

➢ **Geography:**
  ○ The **highest point of Goa is Sonsogor.**
  ○ Goa's seven major rivers are the Zuari, **Mandovi,** Terekhol, Chapora, Galgibag, Kumbarjua canal, Talpona and the Sal.
  ○ Most of Goa's soil cover is made up of laterites.

➢ **Wildlife Sanctuaries and National Parks:**
  ○ **Dr. Salim Ali Bird Sanctuary**
  ○ **Mhadei Wildlife Sanctuary**
  ○ **Netravali Wildlife Sanctuary**
  ○ **Cotigao Wildlife Sanctuary**
  ○ **Bhagwan Mahaveer Sanctuary**
  ○ **Mollem National Park**

■■■

**Key Points**

**Details**

**Summary**

# Key Points

# Details

# Summary