

OFFICERS' Pulse

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Schemes

1) National Apprenticeship Training Scheme

About the Scheme

- The National Apprenticeship Training Scheme is a **one year programme equipping technically qualified youth with practical knowledge and skills** required in their field of work. The scheme was launched in **2016**.
- The scheme **fulfills the gaps in the practical training of fresh graduate engineers, diploma holders in engineering** and also of the **non-engineering degree students** so as to make them industry/establishment ready.
- It further aims to improve their quality of industry/commercial exposure and develop the technical human resource for the industries and establishments.
- The Apprentices are **imparted training by the organizations at their place of work**.
- During the period of apprenticeship, the apprentices are paid a **stipend amount, 50% of which is reimbursable to the employer from the Government of India**.
- At the end of the training period the apprentices are issued a **Certificate of Proficiency** by the Government of India which can be registered at all employment exchanges across India as valid employment experience.
- The scheme has demonstrated to **enhance the employability of students** who have successfully completed the apprenticeship training.

Why in News?

- The Union Cabinet has approved continuation of the National Apprenticeship Training Scheme for next five years.

2) Members of Parliament Local Area Development Scheme

About the Scheme

- The Members of Parliament Local Area Development Scheme (MPLADS) is meant to enable **Members of Parliament to recommend works of developmental nature** with emphasis on **creation of durable community assets based on locally felt needs** to be taken up in their constituencies in the area of national priorities namely drinking water, education, public health, sanitation, roads etc.
- The **Ministry of Statistics and Programme Implementation** has been responsible for the policy formulation, release of funds and prescribing monitoring mechanism for implementation of the Scheme.

Features

- The MPLADS is **fully funded by the Government of India**. The annual MPLADS fund entitlement per MP constituency is **Rs. 5 crore**.
- Funds under the MPLADS are **non-lapsable**.
- **Lok Sabha Members** can recommend works within their Constituencies and **Elected Members of Rajya Sabha** can recommend works within the State of Election (with select exceptions). **Nominated Members** of both the Rajya Sabha and Lok Sabha can recommend works anywhere in the country.
- All works to meet **locally felt infrastructure and development needs**, with an **emphasis on creation of durable assets** in the constituency are permissible under MPLADS as prescribed in the scheme guidelines.
- The MPLADS funds can be merged with other schemes such as MGNREGA and Khelo India.

Allocation for SC & ST

- The guidelines recommend MPs to suggest works costing **at least 15 per cent** of their MPLADS entitlement for the year for areas inhabited by **Scheduled Caste population** and **7.5 per cent** for areas inhabited by **Scheduled Tribe population**.
- In case there is insufficient tribal population in the area of Lok Sabha Member, they may recommend this amount for the creation of community assets in tribal areas outside of their constituency but within their State of election.

Implementation

- Under MPLADS, the role of the MPs is limited only upto recommendation of works. Thereafter, it is the responsibility of the **District Authority** to sanction, execute and complete the works recommended by Members of Parliament within the stipulated time.
- The District Authority shall identify the Implementing Agency capable of executing the eligible work qualitatively, timely and satisfactorily. It shall be responsible for timely and effective implementation of such works.
- Information on MPLADS (the number and cost of works sanctioned, implementing agencies, projects completed, etc) should be made available to citizens under the **Right to Information Act**.
- **At least 10% of the projects** under implementation in the district are to be **inspected** every year by the district authority.

Suspension of MPLADS

- In April 2020, the central government announced suspension of MPLADS, due to the COVID-19 pandemic.
- Suspension of the MPLAD Scheme was expected to make Rs 7,800 crore available to the government to fight COVID-19.

Why in News?

- The Union Cabinet has approved restoration and continuation of the MPLADS which was discontinued in view of COVID-19 pandemic.
- For 2021-22, it is only a partial restoration, since instead of ₹5 crore for each MP, the sum will only be ₹2 crore.
- MPs will get the entire funds from the next financial year.

3) Production Linked Incentive Scheme

About the scheme

- The Production Linked Incentive (PLI) aims to give companies **incentives on incremental sales from products manufactured in domestic units**. Apart from **inviting foreign companies to set shop in India**, the scheme also aims to **encourage local companies to set up or expand existing manufacturing units**.
- In April last year, the central government had for the first time notified the PLI scheme for **mobile phones and allied component manufacturing**.
- As a part of the scheme, companies which set up new mobile and specified equipment manufacturing units or expanded their present units would get **incentives of 4 to 6 per cent**, after they achieve their investment and production value target for each year.
- Later, the government announced **expansion of the PLI scheme to include 13 more sectors** such as automobile and automobile components, pharmaceutical drugs, textile products, food products, high efficiency solar photo-voltaic modules, white goods such as air conditioners and LED bulbs, speciality steel products, drones and drone components, etc.

Why the production is linked scheme needed?

- The PLI schemes have been introduced as a **key element of the Atma Nirbhar Bharat package** to transform the

manufacturing landscape of the Indian economy and integrate it into the global supply chains.

- The strategy behind these schemes is to offer companies **incentives on incremental sales from products manufactured in India, over the base year.**
- They have been specifically designed to **boost domestic manufacturing in sunrise and strategic sectors, curb cheaper imports and reduce import bills, improve cost competitiveness of domestically manufactured goods, and enhance domestic capacity and exports.**

Why in News?

- Representatives of the toy industry in India urged the government to bring the sector under the Production Linked Incentive Scheme to make it competitive and get it on a fast-growth mode.
- They said that the toy sector can be a **force multiplier for the socio-economic development of tier-II and**

tier-III cities in the country given its potential to generate jobs at scale.

- **For every \$10 million generated in revenue, the toy industry has the potential to create 1,000 direct and several thousand downstream jobs** in the country.
- In addition to the skilled labour and technological expertise, India also has a **cost advantage over global toy makers**, including China, Vietnam and Thailand. For instance, the **current cost of labour in India is one-third that of China.**
- The country has over 4,000 toy makers under diverse categories and only 10% of them are now in the organised sector.
- The global toy market is currently estimated to be about \$80-100 billion while India accounts for a minuscule share of this in the region of \$1.5 billion. However, the country's toy sector is projected to grow at a CAGR of 15% between 2021 and 2026, according to industry estimates.

Initiatives

1) Ek Bharat Shreshtha Bharat

About the scheme

- The initiative 'Ek Bharat Shreshtha Bharat' was announced by Prime Minister Narendra Modi on 31st October, 2015 ('National Unity Day') to commemorate the 140th birth anniversary of Sardar Vallabhbhai Patel to **revive a sense of 'nationhood'**.
- The programme aims to **actively enhance interaction between people of diverse cultures** living in different States and UTs in India, with the objective of promoting greater mutual understanding amongst them.
- As per the programme, each year, **every State/UT would be paired with another State/UT** in India for reciprocal interaction between the people.
- It is envisaged through this exchange, that the knowledge of the language, culture, traditions and practices of different states will lead to an enhanced understanding and bonding between one another, thereby strengthening the unity and integrity of India.
- The broad objectives of the initiative are as follows:
 1. **To CELEBRATE** the Unity in Diversity of our Nation and to maintain and strengthen the fabric of traditionally existing emotional bonds between the people of our Country;
 2. **To PROMOTE** the spirit of national integration through a deep and structured engagement between all Indian States and Union Territories through a year-long planned engagement between States;
 3. **To SHOWCASE** the rich heritage and culture, customs and traditions of either State for enabling people to understand and appreciate the diversity that is India, thus

fostering a sense of common identity

4. **TO ESTABLISH** long-term engagements and,
5. **TO CREATE** an environment which promotes learning between States by sharing best practices and experiences.

Why in News?

- The Union Ministry of Education has launched **Bhasha Sangam initiative for schools and Bhasha Sangam Mobile App** under Ek Bharat Shreshtha Bharat programme.
- Bhasha Sangam is an initiative to **teach basic sentences of everyday usage in 22 Indian languages**.
- The Bhasha Sangam mobile app has more than 100 sentences of common usage, both in text and audio format, in 22 Indian languages.
- The idea is that people should acquire basic conversational skills in an Indian language other than their mother tongue.

2) Aspirational Districts Programme

About the programme

- Launched in 2018, the Aspirational Districts Programme (ADP) is one of the largest experiments on **outcomes-focused governance** in the world.
- The ADP is **NITI Aayog's** flagship initiative to **uplift those backward 117 districts that are lagging behind in specific development parameters** of health and nutrition, education, agriculture and water resources, financial inclusion, skill development, and basic infrastructure.

Core Strategy

- The broad contours of the programme are **Convergence** (of Central & State Schemes), **Collaboration** (of Central, State level 'Prabhari' Officers & District Collectors), and **Competition** among

districts driven by a spirit of mass Movement.

- With States as the main drivers, this program focuses on the strength of each district, identifies low-hanging fruits for immediate improvement, measures progress, and ranks districts.

Selection of districts

- **117 districts** were identified using a composite index of key data sets that included deprivation enumerated under the Socio-Economic Caste Census, key health and education sector performance and state of basic infrastructure.

Institutional framework

- **NITI Aayog** anchors the programme with support from Central Ministries and the State Governments.
- Officers at the level of Joint Secretary / Additional Secretary have been nominated to become the '**Central Prabhari Officers**' of each district.
- States have appointed **state-nodal and Prabhari officers**.
- An Empowered Committee under the Convenorship of the CEO, NITI Aayog helps in the convergence of various government schemes and streamlining of efforts.

Focus Areas

- To enable optimum utilization of their potential, this program focuses closely on improving people's ability to participate fully in the vibrant economy.
- **Health & Nutrition, Education, Agriculture & Water Resources, Financial Inclusion & Skill Development, and Basic Infrastructure** are this programme's core areas of focus.

Baseline Ranking

- The objective of the program is to **monitor the real-time progress** of aspirational districts based on 49 indicators (81 data-points) from the **5 identified thematic areas** - Health & Nutrition, Education, Agriculture &

Water Resources, Financial Inclusion & Skill Development and Infrastructure.

- Districts are aspiring to first catch-up with the best district within their State, and subsequently aspire to become one of the best in the country, by competing with, and learning from others in the spirit of **competitive & cooperative federalism**.

Why in News?

- The Union Cabinet has given nod to provide 4G mobile services in over 7,000 villages of 44 aspirational districts across Andhra Pradesh, Chhattisgarh, Jharkhand, Maharashtra, and Odisha. The mobile towers connectivity will be provided in Left Wing Extremist areas.

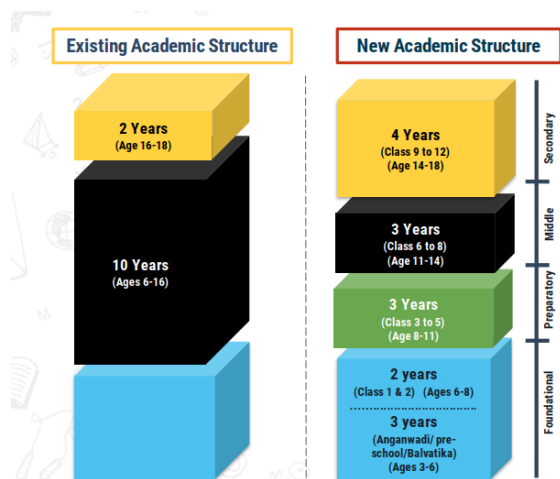
3) National Education Policy 2020 Background

- Last year, the Union Cabinet approved the National Education Policy 2020. The new policy aims to pave way for transformational reforms in school and higher education systems in the country. This policy **replaced the 34 year old National Policy on Education (NPE), 1986**.
- The policy is based on the pillars of "**access, equity, quality, affordability, accountability**" and will transform India into a vibrant knowledge hub.

Highlights of the Policy

Early Childhood Care & Education

- The current 10+2 system to be replaced by a new **5+3+3+4 curricular structure** corresponding to ages 3-8, 8-11, 11-14, and 14-18 years respectively. This will bring the hitherto uncovered age group of 3-6 years under school curriculum, which has been recognized globally as the crucial stage for development of mental faculties of a child.



- The new system will have **12 years of schooling with three years of Anganwadi/ pre schooling.**
- New Policy aims for **universalization of education from preschool to secondary level with 100 % Gross Enrolment Ratio (GER) in school education by 2030.**
- NEP 2020 will bring 2 crore out of school children back into the mainstream through an open schooling system.

Reforms in school curricula and pedagogy

- The school curricula and pedagogy will aim for holistic development of learners by equipping them with the key 21st century skills, reduction in curricular content to enhance essential learning and critical thinking and greater focus on experiential learning. Students will have increased **flexibility and choice of subjects.**
- There will be no rigid separations between arts and sciences, between curricular and extra-curricular activities, between vocational and academic streams.
- **Vocational education will start in schools from the 6th grade**, and will include internships.
- A new and comprehensive **National Curricular Framework for School Education, NCFSE 2020-21**, will be developed by the NCERT.

- NEP 2020 calls for the setting up of a **National Mission on Foundational Literacy and Numeracy** by the Education Ministry. States will prepare an implementation plan for attaining **universal foundational literacy and numeracy in all primary schools for all learners by grade 3 by 2025.**

Medium of instruction

- The policy states, the medium of instruction until at least class 5 (and preferably till class 8) should be **“home language or mother tongue or local/regional language”**. The policy gives the freedom to the state, region, and child to choose **three languages** to be learned. However, at least two of the three languages should be native Indian languages.
- Assessment reforms with **360 degree Holistic Progress Card, tracking Student Progress for achieving Learning Outcomes.**

NCFTE 2021

- A new and comprehensive National Curriculum Framework for Teacher Education, NCFTE 2021, will be formulated by the National Council for Teacher Education (NCTE) in consultation with NCERT.
- By 2030, the **minimum degree qualification for teaching will be a 4-year integrated B.Ed. degree.**
- Every state/district will be encouraged to establish **"Bal Bhavans"** as a special daytime boarding school, to participate in art-related, career-related, and play-related activities.

Higher Education

- **Gross Enrolment Ratio in higher education to be raised to 50 % by 2035;** 3.5 crore seats to be added in higher education.
- The policy envisages broad based, multi-disciplinary, holistic Undergraduate education with flexible curriculum, creative combinations of subjects, integration of vocational

education and multiple entry and exit points with appropriate certification.

- **UG education can be of 3 or 4 years with multiple exit options and appropriate certification within this period.**
- Academic Bank of Credits to be established to facilitate Transfer of Credits.
- **Multidisciplinary Education and Research Universities (MERUs)**, at par with IITs, IIMs, to be set up as models of best multidisciplinary education of global standards in the country.
- The **National Research Foundation** will be created as an apex body for fostering a strong research culture and building research capacity across higher education.
- A **National Mission for Mentoring** will be established, with a large pool of outstanding senior/retired faculty – including those with the ability to teach in Indian languages – who would be willing to provide short and long-term mentoring/professional support to university/college teachers.

Higher Education Commission of India (HECI)

- HECI will be set up as a **single umbrella body for the entire higher education, excluding medical and legal education**. Public and private higher education institutions will be governed by the same set of norms for regulation, accreditation and academic standards.
- Also, HECI will be having four independent verticals namely,
 1. National Higher Education Regulatory Council (NHERC) for regulation,
 2. General Education Council (GEC) for standard setting,
 3. Higher Education Grants Council (HEGC) for funding,
 4. National Accreditation Council (NAC) for accreditation.

- Affiliation of colleges is to be phased out in 15 years and a stage-wise mechanism is to be established for granting **graded autonomy to colleges**.
- Over a period of time, it is envisaged that every college would develop into either an Autonomous degree-granting College, or a constituent college of a university.
- **Internationalization of education** will be facilitated through both institutional collaborations, and student and faculty mobility and allowing entry of top world ranked Universities to open campuses in our country.

Others focus areas

- The policy aims to achieve **100% youth and adult literacy**.
- An autonomous body, the **National Educational Technology Forum (NETF)**, will be created to provide a platform for the free exchange of ideas on the use of technology to enhance learning, assessment, planning, administration.
- NEP 2020 emphasizes setting up of **Gender Inclusion Fund, Special Education Zones for disadvantaged regions** and groups
- A new National Assessment Centre, **PARAKH** (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development), will be set up as a standard-setting body.
- New Policy **promotes Multilingualism** in both schools and higher education.
- **National Institute for Pali, Persian and Prakrit, Indian Institute of Translation and Interpretation** to be set up.
- The Centre and the States will work together to increase the public investment in the **Education sector to reach 6% of GDP at the earliest**.

Why in News?

- The new National Education Policy lays emphasis on **imparting teaching in the mother tongue in primary classes**.

- The Odisha government has started working on a project called '**Samhati**' to **address the language issues faced by tribal students in early grades or elementary classes.**
- Under Samhati, it has been decided that **all teachers of primary level would be provided functional knowledge of tribal languages** and ways of communicating with tribal students. In the first phase, 1,000 teachers would be asked to obtain these language skills.
- According to experts, mother-tongue based education is a welcome step. A tribal student sees the world through his own language. The most important aspect of mother-tongue based education is that it **helps save endangered tribal languages.** If language is saved, the **culture will be preserved** automatically.
- **Odisha** is home to 62 different tribal communities including 13 **particularly vulnerable tribal groups (PVTGs)**, making it the State with the most diverse indigenous communities in the country.

Related Information About PVTGs

- In India, tribal population makes up for 8.6% of the total population. Tribal people live in about 15% of the geographical area of the country.
- Among them some groups are declared as Particularly Vulnerable Tribal Groups (PVTGs) based on the following criteria.

1. **A pre-agriculture level of technology;**
2. **A stagnant or declining population;**
3. **Extremely low literacy; and**
4. **A subsistence level of economy.**

Livelihood

- In 1973, the **Dhebar Commission** created Primitive Tribal Groups (PTGs) as a separate category, who are less developed among the tribal groups.
- In 2006, the Government of India renamed the PTGs as Particularly Vulnerable Tribal Groups.
- **75 tribal groups** have been categorized by the **Ministry of Home Affairs** as PVTGs.
- PVTGs reside in **18 States and UT of A&N Islands.**
- Among the 75 listed PVTG's the highest number are found in **Odisha (13)**, followed by Andhra Pradesh (12). All the four tribal groups in **Andamans**, and one in **Nicobar Islands**, are recognised as PVTGs.
- The Ministry of Tribal Affairs implements the **Scheme of "Development of Particularly Vulnerable Tribal Groups (PVTGs)"** exclusively for them.
- PVTGs depend on various livelihoods such as food gathering, Non Timber Forest Produce (NTFP), hunting, livestock rearing, shifting cultivation and artisan works. Most of their livelihoods depend on the forest.

Environment

1) COP26: Leaders Pledge to cut Methane and save Forests

About UNFCCC

- The United Nations Framework Convention on Climate Change (UNFCCC), signed in **1992** at the **United Nations Conference on Environment and Development** (also known as the **Rio Earth Summit**), constitutes the foundational climate agreement that has provided the platform for most subsequent international climate agreements.
- The UNFCCC entered into force on **21 March 1994**. Today, it has **near-universal membership**. The **197 countries** (including **India**) that have ratified the Convention are called **Parties to the Convention**.
- The ultimate objective of the Convention is to **stabilize greenhouse gas concentrations** at a level that would prevent dangerous anthropogenic interference with the climate system.
- The UNFCCC endorses the **concept of common but differentiated responsibility** in the climate context. This means that while developing country parties are expected to contribute to climate mitigation, because of superior capacity to undertake mitigation and greater contribution to the problem of climate change as a result of historical emissions, **developed countries are expected to take the lead in combating climate change and the adverse effects thereof**.

About CoP

- The Conference of Parties, known as COP, is the **decision-making body** responsible for monitoring and reviewing the implementation of the United Nations Framework Convention on Climate Change.

- It brings together the 197 Parties – that have signed on to the Framework Convention. The COP has met annually since 1995.

Timeline

1992: Earth Summit, Rio de Janeiro

- The meeting that set up the architecture for negotiations on an international climate change agreement. It **finalised the UNFCCC**, the mother agreement that lays down the objectives and principles on which climate action by countries are to be based.
- It **acknowledged that developing countries had fewer obligations and capabilities to bring down emissions**. **Developed countries agreed to a non-binding commitment** to take measures aimed at returning to their 1990 emissions levels by 2000.

1997: COP3, Kyoto

- Delivered the **Kyoto Protocol**, precursor to the Paris Agreement.
- The Protocol assigned **specific emission reduction targets for a set of developed countries**, to be achieved by 2012.
- Others were supposed to take **voluntary actions** to reduce emissions. The Kyoto Protocol **expired last year** as the Paris Agreement took its place.

2007: COP13, Bali

- It reaffirmed the principles of **common but differentiated responsibilities (CBDR)** in the efforts to find a replacement to the Kyoto Protocol, which developed nations were getting increasingly uncomfortable with, especially after the emergence of China as the world's leading emitter.
- Developed countries want **emission reduction targets for everyone, or for nobody**, their argument being that without stringent action from China and India, the success of any climate action would not be possible.

2009: COP15, Copenhagen

- **Developed countries committed to mobilising \$100 billion every year in climate finance** for developing countries from 2020.

2015: COP21, Paris

- The successor agreement was finally delivered. The **Paris Agreement does not assign emission reduction targets to any country.**
- Instead, it **asks all to do the best they can.** But the targets they set for themselves must be **reported and verified.**
- The objective is to **limit the global rise in temperatures to within 2°C from pre-industrial times.**

Why in News?

- The 26th session of the Conference of the Parties (COP 26) to the UN Framework Convention on Climate Change (UNFCCC), was recently held in Glasgow, Scotland, under the **co-presidency of the United Kingdom and Italy.**
- COP26 aimed to keep alive a receding target of capping **global warming at 1.5 degrees Celsius** (2.7 Fahrenheit) above pre-industrial levels to avert still greater damage from the intensified heatwaves, droughts, storms, floods and coastal damage that climate change is already causing.

Global Methane Pledge

- The **United States and the European Union** jointly proposed The Global Methane Pledge -- a collective commitment to **cut methane emissions 30% by 2030.**
- At least **90 countries** (representing more than two-thirds of the global economy) have signed the Global Methane Pledge, with **India and China abstaining** so far.

About Methane

- Methane is the **second-most abundant greenhouse gas** in the atmosphere, after carbon dioxide, and, therefore, pledges related to cutting down its emissions are significant.

- According to the latest **Intergovernmental Panel on Climate Change (IPCC) report**, methane accounts for about **half of the 1.0 degrees Celsius net rise in global average temperature** since the pre-industrial era.
- There are various sources of methane including **human and natural sources.** Human sources of methane include landfills, oil and natural gas systems, agricultural activities, coal mining, wastewater treatment, and certain industrial processes. The oil and gas sectors are among the largest contributors to human sources of methane.
- **India is the third largest emitter of methane**, primarily because of the size of its rural economy and by virtue of having the largest cattle population.

Why is dealing with methane important for climate change?

- According to the **International Energy Agency (IEA)**, while methane has a **much shorter atmospheric lifetime** (12 years as compared to centuries for CO₂), it is a **much more potent greenhouse gas** simply because it absorbs more energy while it is in the atmosphere.
- The UN notes that methane is a powerful pollutant and has a global warming potential that is **80 times greater than carbon dioxide**, about 20 years after it has been released into the atmosphere.
- The IEA has also said that more than 75 per cent of methane emissions can be mitigated with the technology that exists today, and that up to **40 per cent of this can be done at no additional costs.**
- Thus, methane is **one of the easiest and cheapest climate problems to solve** since fixing leaks doesn't require huge advances in technology. It's also a gas that can be **captured or stored underground** -- and sold as the

primary component of natural gas, which has soared in price in recent months.

Glasgow Leaders' Declaration on Forests and Land Use

- Separately, **133 countries** have signed a Glasgow Leaders' Declaration on Forests and Land Use — a declaration initiated by the United Kingdom to **"halt deforestation" and land degradation by 2030**. China, too, is a signatory to this but **India has stayed out**.
- These 133 countries represent 90% of the globe's forested land. The declaration is also backed by a **\$19-billion commitment**, though whether this translates into legally binding flows remains to be seen.
- The Glasgow Declaration is a successor to a failed **2014 New York Declaration for Forests** — that for a while saw significant global traction — and promised to reduce emissions from deforestation by 15%-20% by 2020 and end it by 2030.
- However, **deforestation has only increased, and is responsible for about 20% of the total carbon emissions**.
- One of the goals of the latest pledge, to halt deforestation, is to **ensure that natural forests aren't cleared out for commercial plantations**. The declaration also seeks to **strengthen the rights of indigenous tribes and communities to forestland**.

Why hasn't India signed up?

- Experts in India say that India did not participate in the agreements to stop deforestation and methane emissions because it would **affect its agriculture and trade sectors**. Government officials said agriculture and cattle play an important role in India's rural economy and it is necessary to protect them from being affected.

Estimates of Lost Forests

- According to World Resources Institute's Global Forest Watch, in 2020, the **world lost 258,000 sq km (100,000 sq miles) of forest**, an area larger than the United Kingdom.
- More than 100 national leaders pledged to halt and reverse deforestation and land degradation by the end of the decade, underpinned by \$19 billion in public and private funds to invest in protecting and restoring forests.

2) India pledges new Climate crisis goal: Net zero by 2070

What's the news?

- Addressing the COP26 climate summit in Glasgow, Prime Minister Narendra Modi announced that **India will reach carbon neutrality by 2070**.
- He also announced a **five-point action plan** that included **reducing emissions to 50% by 2030**.
 - **Net-zero**, which is also referred to as **carbon-neutrality**, is a state in which a country's emissions are compensated by absorption and removal of greenhouse gases from the atmosphere.
 - It should be noted that it does not mean that a country would bring down its emissions to zero. That would be gross-zero, which means reaching a state where there are no emissions at all, a scenario hard to comprehend.
 - One way by which carbon can be absorbed is by creating carbon sinks. This way, it is even possible for a country to have **negative emissions**, if the absorption and removal exceed the actual emissions. **Bhutan** has negative emissions, because it absorbs more than it emits.

5 Point Action Plan by PM

- India will increase its **non-fossil fuel power capacity to 500 gigawatts (GW)** by the end of the decade, up from 450GW.

- **Half of India's energy needs** will be fulfilled by **renewable sources** by **2030**.
- **India's 2030 carbon intensity goal** measured as carbon dioxide emissions per unit of gross domestic product will be increased from **35% to 45%**.
- The country will also strive to **cut carbon-dioxide emissions by 1 billion tonnes** from business as usual by 2030.
- By 2070, India will achieve the target of **net-zero emissions**.

News in detail

- This is the **first time** India has committed to net-zero emissions.
- India has the **lowest per capita emissions** of the world's major economies emitting **5%** of the total, despite accounting for **17%** of the world's population and in absolute terms, India is the **fourth largest carbon emitter** after China and the US.
- China has pledged to turn **carbon neutral by 2060** while the US and the European Union as a block, **EU nations** together account for the **third largest** volume of emissions aim to do so by **2050**.

- Many developing countries in Asia have announced net zero targets like **Thailand, Sri Lanka, Malaysia**.
- To keep temperatures from rising more than 1.5C, the UN's Intergovernmental Panel on Climate Change projects that the world has to reach **net-zero carbon dioxide emissions** by about mid-century and then hit net zero across **all greenhouse gases by 2070**.
- **Cropping patterns** in India are changing due to monsoonal flooding and unseasonal and extreme rainfall. India's infrastructure needs to be made **resilient to climate change** and climate change adaptation should be mainstreamed.

India's Solar energy Capacity increased

- India, at the UN climate summit, stated that its **solar energy capacity stands at about 45 gigawatts** after it increased 17 times in the last seven years. India asserted that although the country represents **17% of the global population, its historical cumulative emissions are only 4%**.
- India also achieved a **24% reduction in emission intensity** of its Gross Domestic Product (GDP) over the period of **2005-2014**.

PM MAKES FIVE PLEDGES

- 1** India will increase its non-fossil energy capacity to 500GW by 2030
- 2** India will meet 50% of its energy requirements from renewable energy by 2030
- 3** India will reduce the total projected carbon emissions by one billion tonnes from now to 2030
- 4** By 2030, India will reduce the carbon intensity of its economy by 45% (from a previous target of 35%)
- 5** By 2070, India will achieve the target of net zero

WHAT IS NET ZERO?



Net zero refers to a balance where emissions of greenhouse gases are offset by the absorption of an equivalent amount from the atmosphere. Experts see net zero targets as a critical measure to successfully tackle climate change and its devastating consequences

PLEDGES BY TOP THREE EMITTERS

-  **CHINA:** Beijing announced no new pledges on Monday. It previously pledged net zero by 2060.
-  **UNITED STATES:** The US touted domestic legislation to spend \$555bn to boost renewable power and electric vehicles. It has pledged net zero by 2050.
-  **INDIA:** The country's economy will become carbon neutral by the year 2070

3) COP26: UK launches "India Green Guarantee"

What's the news?

- The United Kingdom has announced that it will provide an **"India Green Guarantee" to the World Bank**, to unlock an additional **750 million pounds for green projects across India**.
- The green guarantee financing will **support clean and resilient infrastructure** in sectors such as clean energy, transport and urban development.
- Further, in an aid-backed **Private Infrastructure Development Group (PIDG)**, the UK has committed more than 210 million pounds in new investment to **back transformational green projects in developing countries**.
- The UK's PIDG financing will go to schemes including **electric vehicle manufacturing in India**, green bonds in Vietnam and solar power in Burkina Faso, Pakistan, Nepal and Chad.

4) Glasgow Climate Pact

What is the news?

- Nearly 200 nations agreed to adopt the Glasgow Climate Pact after more than two weeks of intense negotiations.

Significant Outcomes of the Summit

Ratcheting up ambition

- The agreement acknowledges that **commitments made by countries** so far to cut emissions of planet-heating greenhouse gases are **nowhere near enough to prevent planetary warming from exceeding 1.5 degrees** above pre-industrial temperatures. According to analysis published during the talks, it would lead to a disastrous **2.4°C of heating**.
- To attempt to solve this, it **asks governments to strengthen those targets** by the end of next year, rather

than every five years, as previously required.

- According to the scientists, **temperature beyond a rise of 1.5°C** would unleash extreme sea level rise and catastrophes including crippling droughts, monstrous storms and wildfires far worse than those the world is already suffering.

Targeting Fossil Fuels

- The pact for the first time includes language that asks countries to **reduce their reliance on coal and roll back fossil fuel subsidies**, moves that would target the energy sources that scientists say are the primary drivers of manmade climate change.

Adaptation

- Rich countries agreed in 2009 that poor countries would receive **at least \$100bn a year from 2020**, from public and private sources, to help them cut emissions and cope with the impacts of the climate crisis. But by 2019, the latest year for which data is available, **only \$80bn flowed**.
- The latest deal **urges developed countries to at least double their collective provision of climate finance for adaptation** to developing countries from 2019 levels by 2025.

Loss and damage

- Loss and damage refers to the ravages of the climate crisis that are **too destructive for countries to prevent or adapt to them** – hurricanes and cyclones, for instance, or the inundation of low-lying areas by storm surges.
- Countries have been talking about loss and damage for a decade but the discussions have made little progress. Developing countries say they are already spending large sums from their already stretched budgets to repair the damage caused by the climate crisis, but developed countries are wary of the way the discussion has sometimes been framed, as a call for compensation or reparations for climate damage, which

they cannot accept as it would lay them open to endless legal liability.

- COP26 finally put the critical issue of loss and damage squarely on the main stage. Countries accepted on creating a **new dialogue** dedicated to discussing possible arrangements for loss and damage funding.

5) E-Amrit Portal

What's in the news?

- India has launched 'E-Amrit', a **web portal on electric vehicles (EVs)**, at the COP26 Summit in Glasgow, UK.
- E-Amrit is a **one-stop destination for all information on electric vehicles**—busting myths around the adoption of EVs, their purchase, investment opportunities, policies, subsidies, etc.
- The portal has been developed and hosted by **NITI Aayog** under a collaborative knowledge exchange programme with the UK government and as part of the **UK-India Joint Roadmap 2030**, signed by the Prime Ministers of the two countries.
- E-Amrit intends to complement initiatives of the government on raising awareness on EVs and sensitizing consumers on the benefits of switching to electric vehicles.

6) Why is India's coal usage under scrutiny?

Context

- On the final day of the UN Climate Change Conference held in Glasgow, India's Minister for Environment Bhupender Yadav read out a statement promising to **"phase down" rather than "phase out" the use of coal**. This caused many to raise questions about India's commitment to tackling climate change.

Why must dependence on coal be reduced?

- One key way to achieve **carbon neutrality**, wherein countries

compensate for their carbon emissions by capturing an equal amount of carbon from the atmosphere, is to **reduce dependence on coal**.

- Coal is the **most polluting among fossil fuels**, and hence, its use in particular has come under scrutiny.

Why is it difficult?

- **Coal is used to meet over 70% of India's electricity needs**. Most of this coal comes from **domestic mines**. In FY 2020-21, India produced 716 million tonnes of coal, compared with 431 million tonnes a decade ago.
- Since FY 2018-19, **domestic production has stagnated** and has been unable to meet the rising domestic demand, leading to a **rise in imports**. Most of the country's coal production is limited to **Chhattisgarh, Odisha, Jharkhand and Madhya Pradesh** with a total production of over 550 million tonnes, contributing to over 75% of the country's total coal production.
- The Prime Minister promised to **increase non-fossil fuel energy capacity to 500 GW by 2030, meet 50% energy needs from renewable sources and reduce carbon emissions by 1 billion tonnes in a decade**.
- According to an estimate by the **Centre for Science and Environment**, the promise to reduce emissions by 1 billion tonnes means that India would need to **reduce its carbon output by 22% by 2030**.
- India now meets about **12% of its electricity needs from renewable sources, and increasing it to 50% by 2030 will be difficult**. While some renewable energy sources like solar are **cheap**, they are **unreliable** because of the **intermittency problem**. They thus require the use of storage batteries, which adds to the cost. It should be noted that many low-income countries with low savings may not even possess

the capital required to invest in renewable energy.

- Further, the damage that coal causes to commonly owned resources like the environment is not factored into its cost. So, there is **not much economic incentive for countries to limit or to end their massive reliance on coal.**

Is it fair to ask India to phase out coal?

- India has fought attempts by developed countries to impose a cap on its emissions. It has argued that adopting stringent steps to reduce carbon emissions can **drag down growth and affect efforts to reduce poverty.**
- It should also be noted that **per capita carbon emissions of countries such as India and China are still lower than those of many developed countries.** High-income countries in general emit over 50 times as much carbon as low-income countries and over six times as much carbon as lower middle-income countries.
- Critics have pointed out that the focus on ending the use of coal **deflects attention from other fossil fuels** such as oil and natural gas that are **heavily used by developed countries.**
- They also say developed countries have not made good on their promise made at **COP15 in Copenhagen** to offer **\$100 billion every year** to developing countries to achieve net zero emissions.

What lies ahead?

- It is highly unlikely that developing countries like India and China will reduce their coal consumption or even stop it from rising further. Coal is the **cheapest and most reliable way** to meet their rising energy needs.
- Further, the pledges made by countries at COP26 to reach net zero emissions or to phase down coal are **not legally binding.**
- Some leaders have proposed a **carbon tax** as an alternative to ensure that the price of coal reflects the cost of the damage it causes to the environment.

This may turn out to be a more effective approach towards reining in carbon emissions.

- Coal on average is priced at \$2, while experts believe that it should be priced in the range of \$30 to \$70 to reflect its true cost. But such high carbon taxes can cause a drastic fall in coal output and severely affect living standards unless alternative sources of energy step in to fill the gap.
- India also faces its own set of **structural problems in the power sector** that will make the transition towards clean energy harder. The pricing of power, for instance, is influenced by populist politics which may hinder private investment in renewable energy.

7) Centre approves incentives for sugar, cotton, jute farmers

What's in the news?

- The **Cabinet Committee on Economic Affairs (CCEA)** has increased the price of ethanol extracted from sugarcane juice for blending in petrol to ₹63.45 a litre in the coming sugar marketing season starting December.
 - *CCEA has a mandate to review economic trends on a continuous basis, as also the problems and prospects, with a view to evolving a consistent and integrated economic policy framework for the country.*
 - *Matters regarding **fixation of prices of agricultural products** as well as reviewing progress of activities related to rural development including those concerning small and marginal farmers are in CCEA's competence.*
 - *CCEA is chaired by the **Prime Minister.***
- Oil marketing companies buy ethanol from sugar mills and distilleries at the rate set by the government.

- By reducing the sugar surplus and increasing mills' liquidity, the rate hike is expected to **reduce their pending arrears in payment to sugar cane farmers.**

Price support to CCI

- The CCEA also approved a committed price support of ₹17,408.85 crore to the Cotton Corporation of India (CCI) as reimbursement for its losses in procuring crops from farmers at minimum support prices over the last seven years (2014-15 to 2020-21).
- The CCI is **mandated to procure all Fair Average Quality grade cotton from farmers without any quantitative ceiling**, as and when **prices fall below the MSP rates** set by the Centre, in a bid to protect farmers from distress sales. It helps stabilise the prices and alleviate farmer's distress.

Jute in packaging

- In another decision, the CCEA approved reservation norms for the mandatory use of jute in packaging this year, stipulating that **100% of food grains and 20% of sugar must compulsorily be packed in jute bags.** Such reservation consumed **two-thirds of the total raw jute production** last year.
- As the Centre itself purchases jute sacking bags worth approximately ₹8,000 crore a year to pack grains, it also ensures a guaranteed market for the produce of 40 lakh jute farmers, mostly in eastern India, and supports 3.7 lakh jute mill workers, largely in West Bengal.

Related Information

Ethanol Blending Programme

- The **National Biofuel Policy 2018** envisages an indicative target of **20% blending of ethanol in petrol and 5% blending of biodiesel in diesel by 2030.**
- However, as the existing ethanol distillation capacity in the country is not sufficient to produce ethanol to achieve

blending targets, the Government is encouraging sugar mills, distilleries and entrepreneurs to set up new distilleries and to expand their existing distillation capacities.

Ethanol interest subvention scheme

- Under the Ethanol interest subvention scheme, to promote setting up of molasses-based and grain-based distilleries, the government is extending financial assistance by way of **interest subvention for 5 years**, including a **one-year moratorium** against the loan availed by project proponents from banks, at **6% per annum or 50% of the rate of interest** charged by banks whichever is lower.
- Interest subvention is available to only those distilleries that supply at least **75% of ethanol produced from the added distillation capacity to oil marketing companies (OMCs)** for blending with petrol.

Renewed Focus

- Few months back, Prime Minister Narendra Modi presented a road map **advancing the target date for achieving 20% blending of ethanol in petrol by five years to 2025.** The last two years have seen blending levels of around 5%, which is likely to jump to 10% in the current year.

Significance

- The target would **enhance production of ethanol** from various feedstocks. It would promote ethanol as a fuel which is **indigenous, non-polluting and virtually inexhaustible.**
- It would **improve the environment and the eco-system** and result in **savings on the Oil Import Bill.** It will also ensure timely payment of dues to farmers.

How ethanol production helps the sugar industry?

- There has been **surplus production of sugar** in the country since sugar season 2010-11 (except reduction due to drought in sugar season 2016-17); &

sugar production is likely to remain surplus in the country in coming years due to introduction of improved varieties of sugarcane.

- This surplus sugar puts pressure on domestic ex-mill prices of sugar. The excess stocks which remain unsold also block funds of sugar mills to the tune of about Rs. 19,000 crore thereby affecting liquidity positions of sugar mills resulting in accumulation of cane price arrears of farmers.
- **Diversion of excess sugarcane & sugar to ethanol** is a correct way forward to deal with surplus stocks. Diversion of excess sugar would help in **stabilizing the domestic ex-mill sugar prices** and will also help sugar mills to **get relieved from storage problems**. It will **improve their cash flows** and facilitate them in clearance of cane price dues of farmers; and will facilitate mills to function in the coming years.

8) One Sun One World One Grid

About OSOWOG

- The idea of 'One Sun One World One Grid' (OSOWOG) was originally proposed by Prime Minister Narendra Modi at the **first assembly of the International Solar Alliance** (*Refer "Organisations" section*) in 2018.
- OSOWOG is an initiative to build a **global ecosystem of interconnected renewable energy resources**. The blueprint for the OSOWOG will be developed under the **World Bank's technical assistance programme** that is implemented to accelerate the deployment of grid connected rooftop solar installations.
- The proposal is aimed at **addressing the issue of reliability of supply from solar power plants**, which do not generate electricity after the sun has set. A transnational grid would allow countries to source solar power from regions where it is daytime to meet

their green energy needs even when their own installed solar capacity is not generating energy.

- OSOWOG is also aimed at **addressing the issue of high cost of energy storage**. The high cost of energy storage is a key challenge to boosting the use of renewable energy and that the OSOWOG initiative is a possible solution for driving down the need for storage, which in effect will reduce the costs of the energy transition.
- OSOWOG is planned to be completed in **three phases**. The first phase will entail interconnectivity within the Asian continent; the second phase will add Africa and the third phase will globalise the whole project.

Why in News?

- Prime Minister Narendra Modi and UK Prime Minister Boris Johnson have launched the **Green Grids Initiative—One Sun One World One Grid (GGI-OSOWOG)** at COP26 in Glasgow, UK. The initiative aims to **connect energy grids across borders to facilitate a faster transition to the use of renewable energy**.
- Aiming to synergize its efforts and actions with other similar initiatives globally, the GGI—OSOWOG initiative will bring more technical, financial and research cooperation to help facilitate cross-border renewable energy transfer projects, which will give OSOWOG its global infrastructure.
- The Green Grids Initiative of the United Kingdom aims to bring together a group of governments, legislators and international organisations, to accelerate the construction of the new infrastructure needed for a world powered by clean energy.
- In May 2021, the UK and India agreed to combine forces of the Green Grids Initiative and the One Sun One World One Grid initiative and jointly launch GGI-OSOWOG; i.e. OSOWOG has evolved

into GGI-OSOWOG as part of bilateral cooperation.

Potential of GGI-OSOWOG

- The joint initiative will not only **reduce storage needs** but also **enhance the viability of solar projects**. This initiative will also **reduce carbon footprints and energy cost** and open a new avenue for cooperation between different countries and regions.
- Solar energy is clean and sustainable. Challenge is that this energy is only available during the daytime and is dependent on the weather. 'One Sun, One World & One Grid' is the solution to this problem. Through a worldwide grid, **clean energy can be transmitted to anywhere & anytime**.
- PM Modi also announced that India's space agency **ISRO will soon provide the world a calculator** that can

measure solar energy potential of any region across the globe.

What are the challenges to the OSOWOG project?

- The transmission of power across vast distances would require **large capital investment** to set up long transmission lines. Experts have pointed out that transmission across great distances **can potentially be very expensive**. They have, however, noted that the first step of OSOWOG would be **solar power transfer between neighbouring countries**.
- **India, Bhutan, Bangladesh, Myanmar and Nepal** already share transmission capacity for energy transfer across borders which can be expanded further and utilised for the transfer of solar power between these countries.

Flora & Fauna

1) Fishing Cat Collaring Project

About Fishing Cat



- About twice the size of a typical house cat, the fishing cat (*Prionailurus viverrinus*) is a highly elusive wild cat species found primarily in **wetland and mangrove habitats**, even recorded in highly urbanised landscapes and montane forests.
- This unique species of wild cat is found distributed in patches across **South and Southeast Asia**. Confirmed records show fishing cat populations to be present in Sri Lanka, **India**, Nepal, Cambodia, Thailand, Pakistan, Bangladesh and Myanmar.
- In India, fishing cats have a patchy distribution along the Eastern Ghats, Sundarbans in West Bengal, Chilika lagoon and surrounding wetlands in Odisha, Coringa and Krishna mangroves in Andhra Pradesh.
- **Protection Status:** IUCN Red List: **Vulnerable**; CITES: **Appendix II**; Wildlife Protection Act (1972): **Schedule I**.
- Unlike most felines, fishing cats love water and are known for their expert hunting skills in aquatic habitats.
- Habitat loss and fragmentation, conflict with humans over poultry and livestock, as well as the demand for bushmeat and trade for captive wildlife are causing fishing cat populations to decline.

Why in News?

- The **Wildlife Institute of India** is set to begin collaring ten **Fishing Cats** in the **Coringa Wildlife Sanctuary (CWS) in Andhra Pradesh**. In Asia, a similar project was done earlier in Bangladesh
- The collaring project aims at estimating the fishing cats and studying how the wildlife is surviving in the Coringa Wildlife Sanctuary.
- The three-year project will also study the habitat, feeding habits, threats, and movements.

About Coringa Wildlife Sanctuary

- Coringa Sanctuary, a part of **Godavari Mangroves in Andhra Pradesh**, was declared in 1978 as a wildlife sanctuary to conserve the mangrove vegetation of the estuary.
- The sanctuary is formed in the delta and estuary region of **Godavari river** which merges into the Bay of Bengal.
- The Coringa Sanctuary is the **second-largest stretch of mangroves along the Eastern Coast of India** (after the Sunderbans in West Bengal), with a unique ecosystem, flora and fauna, rare mangrove species, as also otters, fishing cats, sea turtles etc.
- It is also adobe to many migratory bird species coming from Europe, North and Central Asia.

Wildlife Institute of India

- Wildlife Institute of India was established in 1982 as an autonomous institute of the **Ministry of Environment, Forest & Climate Change (MoEF&CC)**.
- Its primary mandates are to:
 - ✓ carry out scientific and applied research on various issues of wildlife and biodiversity conservation,
 - ✓ build capacity in the field of wildlife management and conservation planning,
 - ✓ provide technical inputs to MoEF&CC and other stakeholders.

- WII is headquartered at **Dehradun**, Uttarakhand.

2) Indus River Dolphin

About Indus River Dolphin

- The Indus River Dolphin (*Platanista gangetica minor*) is a **freshwater Dolphin** found in the lower parts of the **Indus River in Pakistan and in River Beas**, a tributary of the Indus River in Punjab, India.
- They have adapted to life in the muddy river and are **functionally blind**. They hunt by emitting ultrasonic sounds, which bounces off of fish and other prey, enabling them to “see” an image in their mind (**echolocation**).
- **Protection Status:** IUCN Red List: **Endangered**; Wildlife Protection Act (1972): **Schedule I**.
- Until recently, it was believed that these dolphins were **endemic to Pakistan**. But in 2007, a remnant but viable population of Indus dolphins was discovered in **Punjab’s Harike wildlife sanctuary** and in the lower Beas river.
- The Indus river dolphin was declared the **State aquatic animal of Punjab** in 2019.



Why in News?

- The census of the Indus river dolphin is set to commence in Punjab.
- The Punjab Government has recently sent a proposal to the Government of India for conservation of dolphins and its habitat that focuses on a multi-pronged strategy, including **habitat management, research, monitoring, advocacy, and environmental education**.
- Villages around the hotspot sites of dolphin occurrence will be developed as models for **community-led conservation**.
- Extension programmes will be held to develop a group of dedicated individuals, called **‘Beas-Dolphin Mitras’** [friends and protectors] of the river Beas. The project also will embark on **dolphin eco-tourism**.

Economy

1) Index of Industrial Production

About IIP

- The Index of Industrial Production (IIP) is a composite indicator that measures the **short-term changes in the volume of production** of a basket of industrial products during a given period with respect to that in a chosen base period.
- **Mining, manufacturing, and electricity** are the three broad sectors in which IIP constituents fall.
- It is compiled and published every month by the **National Statistical Office (NSO)** under the **Ministry of Statistics and Programme Implementation**.
- The current base year is **2011-2012**.
- The **Eight Core Industries** (Coal, Crude Oil, Natural Gas, Refinery Products, Fertilizers, Steel, Cement and Electricity) **comprise 40.27 per cent of the weight of items included in the IIP**.

Why in News?

- According to the data released by the National Statistical Office, India's Index of Industrial Production grew 3.1% in September.

2) Economic Advisory Council to the Prime Minister

EAC-PM

- Economic Advisory Council to the Prime Minister (EAC-PM) is a **non-constitutional, non-permanent and independent body** constituted to give advice on economic and related issues to the Government of India, specifically to the Prime Minister.
- The Terms of Reference of EAC-PM include analyzing any issue, economic or otherwise, referred to it by the Prime Minister and advising him thereon, addressing issues of macroeconomic importance and presenting views thereon to the Prime Minister.

- These could be either **suo-motu or on reference** from the Prime Minister or anyone else.
- The chairman is appointed from time to time when the body is constituted.

Why in News?

- A meeting of the Economic Advisory Council to the Prime Minister (EAC-PM) was held recently.

3) Integrated Ombudsman Scheme

What is the Banking Ombudsman Scheme?

- The Banking Ombudsman Scheme is an expeditious and inexpensive forum for bank customers for **resolution of complaints relating to certain services rendered by banks**.
- It is introduced under the **Banking Regulation Act, 1949** by the RBI with effect from **1995**.

Who is a Banking Ombudsman?

- The Banking Ombudsman is a senior official appointed by the RBI to redress customer complaints against deficiency in certain banking services covered under the grounds of complaint specified under the Banking Ombudsman Scheme.

Grounds of complaints

- The Banking Ombudsman can receive and consider any complaint relating to the following deficiency in banking services:
 1. non-payment or inordinate delay in the payment or collection of cheques, drafts, bills etc.;
 2. non-acceptance, without sufficient cause, of small denomination notes tendered for any purpose, and for charging of commission in respect thereof;
 3. non-payment or delay in payment of inward remittances;
 4. non-adherence to prescribed working hours;

5. failure to issue or delay in issue of drafts, pay orders or bankers' cheques; etc.

When can one file a complaint?

- One can file a complaint before the Banking Ombudsman if the reply is not received from the bank within a period of one month after the bank concerned has received one's complaint, or the bank rejects the complaint, or if the complainant is not satisfied with the reply given by the bank.
- It should be noted that **one's complaint will not be considered by the Ombudsman if he/she has not approached his bank for redressal of his grievance first.**
- The Banking Ombudsman **does not charge any fee** for filing and resolving customers' complaints.

Institutions covered under the Ombudsman Scheme

- **All Scheduled Commercial Banks, Regional Rural Banks and Scheduled Primary Co-operative Banks** are covered under the Banking Ombudsman Scheme.
- In addition to this, the RBI has introduced separate ombudsman schemes for **Non-Banking Financial Companies (NBFCs) and Digital Transactions** with similar guidelines.

Why in News?

- The government has launched the integrated ombudsman scheme which aims to strengthen the grievance redress mechanism for consumers and make dispute resolution more simpler, efficient and responsive.
- Prior to the introduction of this scheme, the RBI had **three different ombudsman schemes** to aid dispute resolution with respect to **banks, NBFCs, and digital transactions**. With the introduction of the integrated scheme, the **earlier ones stand repealed.**
- The integrated scheme makes it a **"One Nation One Ombudsman" approach.**

There will be a single point of reference for the customers to file complaints, submit documents, track status of complaints and provide feedback.

- Besides **Non-Scheduled Primary Co-operative Banks with a deposit size of ₹50 crore and above** have been added to the ambit of the integrated ombudsman now.
- Complaints may be made either **physically** to the Centralised Receipt and Processing Centre or the RBI's offices; or **electronically** through the regulator's complaint management system (<https://cms.rbi.org.in/>).
- The redressal will **continue to be cost-free** for customers of banks and members of the public.

Related Information

Internal Ombudsman Scheme, 2018

- To strengthen the grievance redressal mechanism for customers, the RBI introduced the 'Internal Ombudsman Scheme, 2018'.
- It mandates **Banks with more than 10 branches to have an Internal Ombudsman** to review complaints that were partially or wholly rejected by the respective banks.
- It aimed to ensure that the complaints of the customers are redressed at the level of the bank itself so as to minimize the need for the customers to approach other fora for redressal.

4) India, U.S. commit to linking economies across sectors

What's in the news?

- At the recently held **Trade Policy Forum**, the United States and India committed to integrating their economies across sectors to harness the untapped potential of the bilateral relationship.
- The Forum was convened after a gap of four years.

Working Groups of TPF

- The two sides decided to **activate working groups of the Trade Policy**

Forum (TPF) on agriculture, non-agriculture goods, services, investment, and intellectual property to meet frequently and address issues of mutual concern in a mutually beneficial manner.

- The idea is to deliver tangible benefits to farmers and businesses of both countries by resolving outstanding market access issues.

Mutual market access

- Specifically, the Forum has decided to forge an agreement to facilitate U.S. market access for mangoes, grapes, and pomegranates, pomegranate arils from India, and reciprocate with similar access in the Indian market to cherries, pork/pork products and alfalfa hay for animal feed from the United States.
- The Indian side has sought **restoration of the GSP (Generalized System of Preferences) benefits** by the U.S. and said this would help industries from both sides in integrating their supply chain efficiently.

Totalisation Agreement

- The Forum also agreed on the significance of negotiating a **Social Security Totalization Agreement** in the interest of workers from both sides, and pursuing further engagements for reaching such an agreement.
- The totalisation agreement, being pursued for over a decade, **would allow workers from both countries to move their retirement savings**, the lack of which particularly affects Indian IT workers in the U.S. who lose billions of dollars in statutory U.S. social security contributions that they **cannot repatriate home**.

Related Information About GSP

- The Generalised System of Preferences is one of the oldest trade preference programmes in the world, under which **developed countries offer preferential treatment** (such as zero

or low duties on imports) **to products originating in developing countries**.

- GSP is presently extended by **around 15 developed countries**.
- India, as a developing country, enjoyed special trade benefits from the **GSP programme of the U.S** which allowed duty-free entry of Indian goods worth \$5.6 billion into the U.S.
- In 2019, the U.S. decided to **terminate** India's eligibility for the GSP based on complaints from US' dairy and medical device industries alleging that India has implemented a wide array of trade barriers that are affecting the US exports in those sectors.

5) New Prompt Corrective Action norms

Context

- The RBI has recently issued a notification revising norms for commercial banks to be placed under the regulator's Prompt Corrective Action (PCA) framework should any of their key metrics fall out of line. The revision takes **effect from January 1, 2022**.

What is the purpose of the PCA framework?

- The PCA framework specifies the trigger points or the level in which the RBI will intervene with corrective action if a commercial bank's financial condition worsens below a mark.
- The objective of the PCA framework is to **enable supervisory intervention** at appropriate time and require the supervised entity to initiate and implement **remedial measures** in a timely manner so as to restore its financial health. The PCA framework is also intended to act as a **tool for effective market discipline**.
- In the last almost two decades — the PCA was **first notified in 2002** — several banks have been placed under the framework, with their operations restricted.

What are banks measured on?

- As per the revised PCA norms issued in 2017, banks were to be evaluated on
 - **capital, asset quality, profitability and leverage.**
- The **capital adequacy ratio** governs the capital that a bank ought to hold as a percentage of its total assets. If the ratio is prescribed as 11.5%, a bank must bring its own capital of ₹11.50 for every ₹100 it intends to lend.
- **Asset quality** tells us what portion of the loans is unlikely to be paid back, reflected in the **net non-performing asset ratio** — i.e., the portion of total advances tagged 'non-performing', after the provisioning for bad loans.
- **Return on assets (RoA)** measures profitability, derived from net income (profit) as a percentage of total assets.
- The **leverage ratio** shows how much a lender has stretched itself in borrowing funds to generate income. The more the leverage, the riskier the lender's business.

What curbs do banks face under the PCA?

- The Central bank has defined **three risk thresholds for banks with increasing restrictions** if they are unable to arrest deterioration.

- First, banks face **curbs on mandatory restrictions on dividend distribution of profits**. In the second category, banks additionally face **curbs on branch expansion**. In the final category, the bank additionally faces **restrictions on capital expenditure** with some exemptions.
- The RBI also has the **option of discretionary actions** across strategy, governance, credit risk, market risk and human resources.

What has changed?

- The latest notification has **removed return on assets as an indicator** to qualify for PCA. Further, the 2017 notification applied to **scheduled commercial banks but excluded Regional Rural Banks** from its purview, while the 2021 version **excludes Small Finance Banks and Payment Banks** too.
- In the latest set of rules, the RBI has clearly spelt out that exit from the PCA would be **based on four continuous quarterly results**.
- The RBI announced that the PCA framework would also apply to **foreign banks** operating through branches or subsidiaries.

Organisations

1) Asian Infrastructure Investment Bank

About AIIB

- The Asian Infrastructure Investment Bank (AIIB) is an international development bank that provides financing for infrastructure projects in Asia.
- Headquartered in **Beijing**, it began operations in 2016.
- It includes more than 100 members worldwide (**India** is a founder member of AIIB). AIIB consists of two classes of membership: **regional and non-regional members**.
- **China** is the largest shareholder with 26.6 per cent voting shares in the bank. **India** is the second largest shareholder with 7.6 per cent voting shares followed by **Russia** 6.0 per cent.
- **India** is the largest borrower from the AIIB.



Why in News?

- The Asian Infrastructure Investment Bank has approved a 150 million USD loan to the Government of India for implementation of the Sustainable Urban services program for Chennai Metropolitan Area (CMA).

2) UNWTO

About UNWTO

- The World Tourism Organization (UNWTO) is the United Nations agency

responsible for the promotion of responsible, sustainable and universally accessible tourism.

- Formed in **1975**, UNWTO's headquarter is in **Madrid, Spain**.
- UNWTO's membership includes 159 Member States (including **India**), 6 Associate Members and over 500 Affiliate Members representing the private sector, educational institutions, tourism associations and local tourism authorities.

Why in News?

- The **Pochampally Village in Telangana** has been selected as **one of the best Tourism Villages** by the United Nations World Tourism Organisation.
- The Best Tourism Villages by UNWTO initiative aims to award those villages which are outstanding examples of rural destinations and showcase good practices in line with its specified evaluation areas. It also aims to support villages to enhance their rural tourism potential through training and access to opportunities for improvement.
- Pochampally is often referred to as the **silk city of India** for the exquisite sarees that are woven through a unique style called **Ikat**.
- This style, **Pochampally Ikat**, received **Geographical Indication status** (*Refer Pulse June 2021 edition "India and Pakistan's battle over basmati" topic*) in 2004 and is also known as **Bhoodan Pochampally** to commemorate the Bhoodan movement that was launched by Acharya Vinobha Bhave from this village on April 18, 1951.

Related Information

Bhoodan Movement

- The Bhoodan Movement, also known as the **Bloodless Revolution**, was started by Mahatma Gandhi's disciple **Vinoba Bhave** in 1951 at **Pochampally village**.

- It was a voluntary land reform movement. The movement saw **land owners gifting land to the landless**. Within six years, about 1.9 million ha were collected.
- Over the next two decades the movement took the shape of a law called the **Bhoodan Act** and put the government in charge of distributing land from the land bank.
- The movement later transformed into **Gramdan (village in gift) movement**, under which the whole or a major part of a village land was donated by not less than 75 per cent of the residents for equal distribution among all village residents. Tribal areas were major participants in the Gramdan movement. Both the movements died eventually but left behind the land bank.
- In the past six decades the government has distributed around 971,000 ha of the bhoodan land among the landless. There are over 931,000 ha more to be distributed.

3) UNHCR

About

- The Office of the United Nations High Commissioner for Refugees (UNHCR) was established in **1950** by the **United Nations General Assembly**.
- The agency is mandated to lead and coordinate international action to protect refugees and resolve refugee problems worldwide. Its primary purpose is to **safeguard the rights and well-being of refugees**.
- It strives to ensure that everyone can exercise the right to seek asylum and find safe refuge in another State, with the option to return home voluntarily, integrate locally or to resettle in a third country. It also has a mandate to help stateless people.

Legal Provisions

- The **1951 Convention relating to the Status of Refugees** (commonly known as the **Refugee Convention**) and its

1967 Protocol are the key legal documents that form the basis of UNHCR's work.

- With **149 State parties** to either or both, they define the term 'refugee' and outline the rights of refugees, as well as the legal obligations of States to protect them.
- The core principle is **non-refoulement**, which asserts that a refugee should not be returned to a country where they face serious threats to their life or freedom. This is now considered a rule of customary international law.
- **UNHCR serves as the 'guardian' of the 1951 Convention and its 1967 Protocol**.
- **India has not been a signatory** of the 1951 Refugee Convention or the 1967 Protocol. However, it continues to grant asylum to a large number of refugees from neighbouring States and respects UNHCR's mandate for other nationals, mainly from Afghanistan and Myanmar.

Why in News?

- The UNHCR has released its **Mid-Year Trends report** which reflects on the first six months of this year, providing key statistics and figures on refugees, asylum-seekers and internally displaced persons.
- UNHCR publishes annual worldwide data on forced displacement each June in its **Global Trends reports**. The Mid-Year Trends report was released recently for January-June 2021.

Highlights of the Report

- The trend in **rising forced displacement** continued into 2021 – with global numbers now **exceeding 84 million** – as more people fled violence, insecurity and the effects of climate change.
- The report showed an increase from 82.4 million at the end 2020. This resulted **largely from internal displacement** (someone who is forced to leave their home but who remains within their country's borders), with

more people fleeing multiple active conflicts around the world, especially in Africa.

- **Nearly 51 million people are now internally displaced**, as conflict and violence flared around the world during the first half of 2021. Much of the new internal displacement was in **Africa**, including in the Democratic Republic of the Congo (1.3 million) and in Ethiopia (1.2 million). **Violence in Myanmar and Afghanistan** also forced people from their homes between January-June 2021.
- The **number of refugees** also continued to increase during the first half of 2021, reaching **nearly 21 million**. Most new refugees came from **five countries**: Central African Republic, South Sudan, Syria, Afghanistan and Nigeria.
- The lethal mix of **conflict, COVID-19, poverty, food insecurity and the climate emergency** has compounded the humanitarian plight of the displaced, most of who are hosted in developing regions.

4) International Solar Alliance

About ISA

- International Solar Alliance (ISA) was launched in 2015 by Prime Minister Narendra Modi and former President of France Francois Hollande at the 21st session of the United Nations Climate Change Conference of the Parties (COP-21) in Paris, France.
- The **Paris Declaration** that established the ISA states that the countries share the collective ambition to undertake innovative and concerted efforts to reduce the cost of finance and technology for deployment of solar generation assets.
- ISA was conceived as a coalition of **solar-resource-rich countries** (which lie either completely or partly between the Tropic of Cancer and the Tropic of

Capricorn) to address their special energy needs.

- The first general assembly of the ISA, held in 2018, adopted the amendment to its framework agreement to **expand the scope of membership to all member states of the United Nations**.
- As guided by the Framework Agreement of the ISA, the interests and objectives of the ISA are as follows:
 - ✓ To collectively address key common challenges to scale up solar energy applications in line with their needs;
 - ✓ To mobilize investments of more than **USD 1000 billion by 2030**;
 - ✓ To take coordinated action through programmes and activities launched on a voluntary basis, aimed at better harmonization, aggregation of demand, risk and resources, for promoting solar finance, solar technologies, innovation, R&D, capacity building etc.;
 - ✓ Reduce the cost of finance to increase investments in solar energy in member countries by promoting innovative financial mechanisms and mobilizing finance from Institutions;
 - ✓ Facilitate collaborative research and development (R&D) activities in solar energy technologies among member countries.

- The ISA is headquartered in **Gurugram, Haryana**.

Why in News?

- The UN General Assembly has conferred **Observer Status** to the International Solar Alliance, a decision which would help provide for a well-defined cooperation between the Alliance and the United Nations that would benefit global energy growth and development.
- In a short span of six years, the ISA has become an example of how positive global climate action can be taken

forward through partnerships. ISA provides a dedicated platform for cooperation among Governments, multilateral organisations, industry, and other stakeholders to help achieve a common goal.

- A total of 80 countries have signed and ratified the ISA Framework Agreement and 101 countries have only signed the agreement. **The USA** has recently joined the ISA as a member country.

Science and Technology

1) World Antibiotic Awareness Week

About Antimicrobial Resistance

- Antimicrobial Resistance (AMR) occurs when **bacteria, viruses, fungi and parasites** change over time and **no longer respond to medicines** making infections harder to treat and increasing the risk of disease spread, severe illness and death.
- As a result of drug resistance, antibiotics and other antimicrobial medicines become ineffective and infections become increasingly difficult or impossible to treat.
- AMR is a global health and development threat. It requires urgent multisectoral action in order to achieve the Sustainable Development Goals (SDGs).
- **WHO** has declared that **AMR is one of the top 10 global public health threats facing humanity**.
- Microorganisms that have antimicrobial resistance are sometimes called **“superbugs”**.

Why is antimicrobial resistance a global concern?

- The emergence and spread of drug-resistant pathogens that have acquired new resistance mechanisms, leading to antimicrobial resistance, continues to **threaten our ability to treat common infections**.
- Especially alarming is the rapid global spread of multi- and pan-resistant bacteria (superbugs) that cause infections that are not treatable with existing antimicrobial medicines such as antibiotics.
- The cost of AMR to national economies and their health systems is significant as it affects productivity of patients or their caretakers through prolonged hospital stays and the need for more expensive and intensive care.

What accelerates the emergence and spread of antimicrobial resistance?

- AMR occurs **naturally** over time, usually through genetic changes.
- Antimicrobial resistant organisms are found in people, animals, food, plants and the environment (in water, soil and air). They can **spread from person to person or between people and animals**, including from food of animal origin.

Other causes

- The main drivers of antimicrobial resistance include:
 - the misuse and overuse of antimicrobials;
 - overuse of antibiotics in livestock and fish farming;
 - lack of access to clean water, sanitation and hygiene (WASH) for both humans and animals;
 - poor infection and disease prevention and control in health-care facilities and farms;
 - poor access to quality, affordable medicines, vaccines and diagnostics;
 - lack of awareness and knowledge; and
 - lack of enforcement of legislation.

Fight against AMR

Need for coordinated action

- AMR is a complex problem that requires a **united multisectoral approach**.
- The **One Health approach** brings together multiple sectors and stakeholders engaged in human, terrestrial and aquatic animal and plant health, food and feed production and the environment to communicate and work together in the design and implementation of programmes, policies, legislation and research to attain better public health outcomes.
- **Greater innovation and investment** is required in operational research, and in research and development of new antimicrobial medicines, vaccines, and diagnostic tools.

Global Action Plan on Antimicrobial Resistance

- Globally, countries committed to the framework set out in the Global Action Plan (GAP) 2015 on AMR during the 2015 World Health Assembly of WHO and committed to the development and implementation of multisectoral national action plans.

World Antimicrobial Awareness Week (WAAW)

- Held annually since 2015 (18 to 24 November), WAAW is a global campaign that aims to raise awareness of antimicrobial resistance worldwide and encourage best practices among the general public, health workers and policy makers to slow the development and spread of drug-resistant infections.

The Global Antimicrobial Resistance and Use Surveillance System (GLASS)

- **WHO** launched the GLASS in 2015 to foster standardized Antimicrobial resistance surveillance globally. Currently GLASS collects and reports data on Antimicrobial resistance rates aggregated at national level.

AWaRe tool

- In 2019, the WHO launched a new online tool aimed at guiding policy-makers and health workers to use antibiotics safely and more effectively.
- The tool, known as 'AWaRe', classifies antibiotics into three groups:
 1. **Access** — antibiotics used to treat the most common and serious infections
 2. **Watch** — antibiotics available at all times in the healthcare system
 3. **Reserve** — antibiotics to be used sparingly or preserved and used only as a last resort

NAP-AMR

- The Government of India adopted the **National Action Plan on AMR (NAP-AMR)** in 2017, with the Ministry of Health and Family Welfare (MoHFW) as the nodal ministry.

- The overarching goal of NAP-AMR is to effectively combat antimicrobial resistance in India, and contribute towards the global efforts to tackle this public health threat.

Red Line Campaign

- The **Union Ministry of Health and Family Welfare** has made it mandatory to display a 5mm-thick red vertical band (line) on packaging of prescription-only drugs (which compulsorily require Doctors' Prescription).
- It aims at sensitising people and making them cautious while buying these Antibiotic medicines that are widely sold without prescriptions.

Why in news?

- The **World Antibiotic Awareness Week** was observed from **November 18 to 24**.
- **Theme: "Spread awareness. Avoid resistance"**.

2) Solar flares

What are sunspots?

- The **solar magnetic cycle** that works in the deep interior of the Sun creates regions that rise to the surface and appear like **dark spots**. These are the **sunspots**.
- They appear dark because they are **cooler than other parts of the Sun's surface**.

What are solar flares?

- Solar flares are **highly energetic phenomena that happen inside the sunspots**.
- In a solar flare, the energy stored in the sun's magnetic structures is **converted into light and heat energy**.
- This causes the **emission of high energy x-ray radiation and highly accelerated charged particles to leave the sun's surface**.
- Sometimes solar flares also cause **hot plasma to be ejected from the Sun**, causing a **solar storm**, and this is called **Coronal Mass Ejection (CME)**. CMEs

can harbour energies exceeding that of a billion atomic bombs.

How does it affect us?

- The energy and radiation and high energy particles emitted by flares can **affect Earth bound objects and life on Earth** – it can affect the electronics within satellites and affect astronauts.
- Very powerful earth directed coronal mass ejections can cause **failure of power grids and affect oil pipelines and deep-sea cables**.
- They can also cause **spectacular aurorae** in the high-latitude and polar countries.

Why in News?

- Scientists from the Indian Institute for Science Education and Research, Kolkata, have analysed a solar flare that occurred on the Sun which triggered a magnetic storm.

3) Bridgmanite

What's in the news?

- A recent study led by IIT Kharagpur researchers has found the **presence of veins of the mineral Bridgmanite** within the **Katol L6 Chondrite meteorite** that fell in Nagpur District of Maharashtra.
- The recent findings add evidence to the **Moon-forming giant impact hypothesis** and further study could help us understand the **formation and evolution of the Earth**.

About Bridgmanite

- Bridgmanite is the **most abundant mineral in the interior of the Earth**. It consists of magnesium, iron, calcium aluminum oxide.
- It is present in the **lower mantle** (from 660 to 2700 km), and it is important to understand its formation mechanism to **better comprehend the origin and evolution of planetary interiors**.

- While the crystal structure of natural bridgmanite has been reported in other meteorites such as the **Tenham and Suizhou meteorites**, their **chemical composition does not fully match** with the terrestrial bridgmanite present in the Earth's interior.
- Earth was an **ocean of magma** in the past. The **heavier iron and nickel went to the core** while the **lighter silicates stayed in the mantle**. By studying the meteorite, we can understand more details about the formation of the Earth and other planets.

Moon-forming giant impact hypothesis

- According to the Moon-forming giant impact hypothesis, nearly 4.5 billion years ago, the **Earth collided with a planet the size of Mars named Thela**, and the force of this impact was so huge as to **melt the Earth down from the surface to a depth of 750 km to 1,100 km**.
- This caused the Earth to be bathed in a magma ocean, and the **ejecta from the collision led to the formation of the Moon**.
- This is the most favoured hypothesis on the formation of the Moon and the present finding by the Kharagpur team lends further support to it.

Additional Details

Meteor, Meteoroids, Meteorites

- **Meteoroids** are **objects in space** that range in size from dust grains to small asteroids.
- When meteoroids **enter Earth's atmosphere** at high speed and burn up, the fireballs or "shooting stars" are called **meteors**.
- When a **meteoroid survives a trip through the atmosphere and hits the ground**, it's called a **meteorite**.

Reports and Indices

1) Multidimensional Poverty Index

What's in the news?

- NITI Aayog has released its first-ever Multidimensional Poverty Index (MPI).

About the Index

- The MPI seeks to **measure poverty across its multiple dimensions** and in effect **complements existing poverty statistics based on per capita consumption expenditure**.
- It has **three equally weighted dimensions** – **health, education, and standard of living** – which in turn are represented by **12 indicators** such as nutrition, child and adolescent mortality, antenatal care, years of schooling, school attendance, cooking fuel, sanitation, drinking water, electricity, housing, assets, and bank accounts.
- The index is calculated by first **setting the deprivation cut-offs for each indicator**, i.e., the level of achievement considered normatively sufficient for an

individual to be considered not deprived in an indicator.

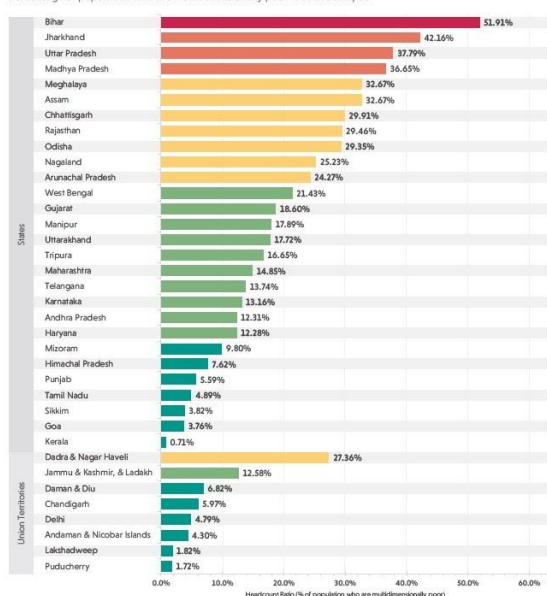
- For example, the individual has completed at least six years of schooling. Such a cut off would be applied to determine whether the individual is deprived in each indicator. Weights are added to each indicator and a composite metric is then used to calculate the index.
- The report was **based on the National Family Health Survey 4 (NFHS-4)**, which was conducted between 2015 and 2016, and developed by the NITI Aayog in consultation with 12 ministries and in partnership with state governments.

Highlights of the Index

- According to the **headcount ratio** of the Index, **25.01 per cent of the Indian population are multidimensionally poor**.
- It is difficult to compare the headline numbers of the multidimensionally poor over a period since this is the first ever report on the MPI.

India: Headcount Ratio

Percentage of population who are multidimensionally poor in each State/UT



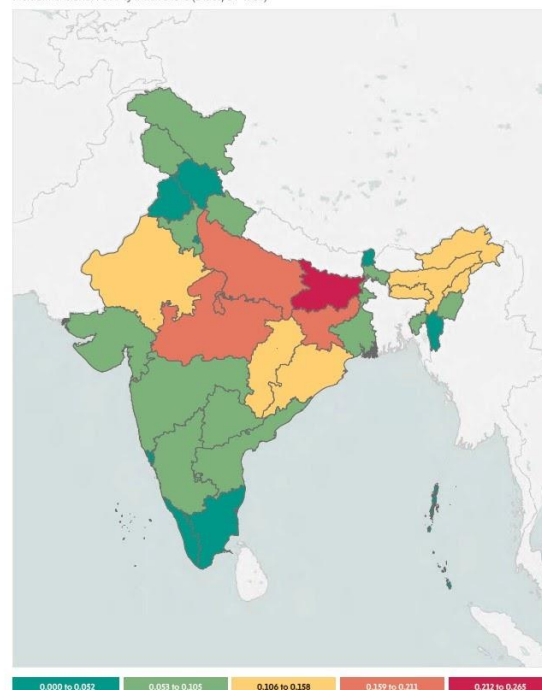
Note on data representation: As the data period for the NFHS-4 is 2015-16, the estimates for the present Union Territories of Jammu & Kashmir, and Ladakh have been computed for their combined geographical region. Similarly, the estimates for the present Union Territory of Dadra & Nagar Haveli & Daman & Diu have been computed separately for their erstwhile regions.

Multidimensional Poverty Index

The size of the bar represents the percentage of population who are multidimensionally poor in each State/UT of India. The colour of the bar represents the MPI score of the district. The colour moves from green, through yellow, to red as the MPI score increases. Green represents areas with the lowest MPI scores while red represents areas with the highest MPI scores. The legend provides the range of MPI scores represented by a colour.

India: States & Union Territories

Multidimensional Poverty Index Score (State/UT-wise)

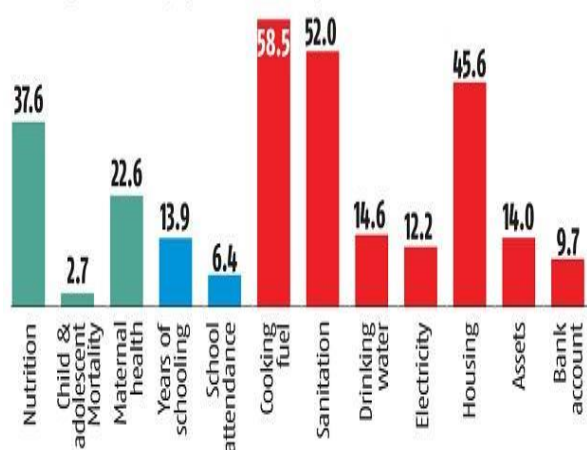


The colour represents the MPI score of a State/UT. The colour moves from green, through yellow, to red as the MPI score increases. Green represents areas with the lowest MPI scores while red represents areas with the highest MPI scores. The legend provides the range of MPI scores represented by a colour.

- The **highest number of the deprived is in cooking fuel and sanitation** at 58.5 per cent and 52 per cent, respectively. This means more than half the population were poor on these two counts.
- Next came housing, which had 45.6 per cent of the population as deprived during 2015-16, followed by nutrition (37.6 per cent), maternal health (22.6 per cent), drinking water (14.6), assets (14), years of schooling (13.9), electricity (12.2), bank account (9.7), school attendance (6.4) and child and adolescent mortality (2.7).

THE OTHER INDIA

Percentage of the total population that is deprived in each indicator



- With more than 50% of the population in **Bihar** identified as “multidimensionally poor”, the State has the **maximum percentage of population living in poverty** among all the States and the Union Territories.
- As per the index, 51.91% of the population in Bihar is poor, followed by Jharkhand (42.16%), Uttar Pradesh (37.79%), Madhya Pradesh (36.65%) and Meghalaya (32.67%).
- On the other hand, **Kerala** registered the lowest poverty levels (0.71%), followed by Puducherry (1.72%), Lakshadweep (1.82%), Goa (3.76%) and Sikkim (3.82%).
- Other States and Union Territories where **less than 10% of the population is poor** include Tamil Nadu

(4.89%), Andaman & Nicobar Islands (4.30%), Delhi (4.79%), Punjab (5.59%), Himachal Pradesh (7.62%) and Mizoram (9.8%).

Significance of the Index

- Measuring poverty has evolved globally over the years. The conventional method has been to **specify a minimum income (or expenditure)** required to purchase a basket of goods and services to meet basic needs.
- It required defining a **poverty line** first, which the **C Rangarajan committee** had estimated in 2014 to be **Rs 972 a month per person in rural areas and Rs 1,407 a month per person in urban areas**, at 2011-12 prices.
- The development of the National Multidimensional Poverty Index of India is an important contribution towards instituting a public policy tool which monitors multidimensional poverty, informs evidence-based and focused interventions, thereby ensuring that no one is left behind.
- India's national MPI measure uses the globally accepted and robust methodology developed by the **Oxford Poverty and Human Development Initiative (OPHI)** and the **United Nations Development Programme (UNDP)**.
- The **district-wise estimation** of the national MPI will also ensure reaching out to the furthest behind first through focused efforts on specific indicators and dimensions.

2) Life expectancy lower for urban poor

What's in the news?

- Azim Premji University in collaboration with 17 regional NGOs across India has recently released a report titled '**Health Care Equity in Urban India**'.
- The report explores health vulnerabilities and inequalities in cities in India. It also looks at the availability, accessibility and cost of healthcare

facilities, and possibilities in future-proofing services in the next decade.

Highlights of the Report

- The report noted that **life expectancy among the poorest is lower by 9.1 years and 6.2 years among men and women**, respectively, compared to the richest in urban areas.
- A **third of India's people now live in urban areas**, with this segment seeing a rapid growth from about 18% (1960) to 28.53% (2001) to 34% (in 2019). **Close to 30% of people living in urban areas are poor.**
- The report, besides finding **disproportionate disease burden on the poor**, also pointed to a **chaotic urban health governance**, where the multiplicity of healthcare providers both within and outside the government without coordination are challenges to urban health governance.
- The other key findings include a **heavy financial burden on the poor, and less investment in healthcare by urban local bodies.**
- The report calls for **strengthening community participation and governance; building a comprehensive and dynamic database on the health and nutrition status**, including co-morbidities of the diverse, vulnerable populations; **strengthening healthcare provisioning through the National Urban Health Mission**, especially for primary healthcare services; and **putting in place policy measures to reduce the financial burden of the poor.**
- It also advocates for a **better mechanism for coordinated public healthcare services and better governed private healthcare institutions.**
- It added that urban healthcare has received relatively less research and policy attention.

3) Annual Status of Education Report

About ASER

- Annual Status of Education Report (ASER) is an annual survey that aims to provide **reliable estimates of children's enrolment and basic learning levels** in India.
- It is conducted by **non-governmental organization Pratham.**

Why in News?

- NGO Pratham has released its Annual Status of Education Report 2021.
- The survey was conducted over 76,000 households with children aged six to 14.
- Due to the pandemic, ASER's 16th annual report was based on a **phone survey** assessing enrolment in schools and tuition classes, and access to devices and learning resources, rather than the organisation's usual face-to-face survey which assesses learning outcomes and children's competencies in reading and arithmetic skills.

Highlights of the Report

- The **percentage of rural children who were not enrolled in school doubled** during the pandemic. In 2018, only 2.5% of children were not enrolled in school. In both the 2020 and 2021 surveys, that figure had **jumped to 4.6%.**
- **Government school enrolment spiked significantly** from 64.3% in 2018 to **70.3%** in 2021. The shift to government school enrolment could be a result of financial distress, the closure of affordable private schools and the movement of migrants to rural areas.
- Although it is not clear if this is a permanent phenomenon or will be reversed post the pandemic, it is important to ensure that **government schools and teachers are equipped and given the necessary resources** for this surge in enrolment.
- The survey found that while 92% of children had textbooks for their grade, **only a third in government schools**

had access to any other learning resources or support in the form of worksheets, phone messages or any other sort of learning activities in the week of the survey.

Digital access

- **Smartphone access** was a challenge in the delivery of online education. Although **availability almost doubled to 68%**, **only a quarter of children even in homes with smartphones were able to access it whenever needed.**
- In smartphone owning households, 26% of children had no access to the device at all, while 47% had only occasional access. There were **major differences** in the experience of students from different States. For instance, 91% of students from Kerala and almost 80% from Himachal Pradesh had online education, but only 10% from Bihar and 13% from West Bengal.
- Going forward, there is a need for **device libraries**, so all children can have access to needed devices.
- During the pandemic, almost **40% of students took tuition classes**, as many parents struggled to provide the learning support students were not receiving from closed schools.

4) Adaptation Gap Report 2021

What's the news?

- The **United Nations Environment Programme (UNEP)** has released its **Adaptation Gap Report 2021** during the ongoing COP26 at Glasgow.
 - *UNEP is the leading environmental authority in the United Nations system. It promotes the coherent implementation of the environmental dimension of sustainable development within the United Nations system.*
 - *Headquartered in Nairobi, Kenya, it was founded as a result of the UN Conference on the Human*

*Environment (also known as the **Stockholm Conference**) in 1972.*

- *Other Reports by UNEP: **Global Environment Outlook, Emissions Gap Report.***

Highlights of the Report

- The report highlighted that Earth has already **warmed more than 1.1°C** since the start of the Industrial Revolution and the world has witnessed **climate-related devastation in 2021** ranging from floods in Europe and China, heat waves in Pacific NorthWest, wildfires in Greece and floods and monsoon variabilities in India.
- It also found that if the world limits warming to **1.5°C**, many climate risks remain and will be **irreversible** while warning that the gap between **costs of adaptation and the current financial flow is widening.**
- The **costs of adaptation** are likely in the higher end of an estimated \$140-300 billion per year by 2030 and \$280-500 billion per year by 2050 for developing countries only.
- **Climate finance** flowing to developing countries for mitigation and adaptation planning and implementation reached **\$79.6 billion** in 2019.
- Overall, estimated adaptation costs in developing countries are **five to 10 times** greater than current public adaptation finance flows, and the **gap is widening.**
- The world needs to scale-up **public adaptation finance** through direct investment and by overcoming barriers to private sector involvement.
- The report suggested that governments should use the fiscal recovery from the pandemic to prioritise interventions that achieve both **economic growth and climate change resilience.**

5) Logistics Ease Across Different States

What's in the news?

- The **Ministry of Commerce & Industry** has released its 3rd edition of Logistics Ease Across Different States (LEADS).
- The LEADS index **ranks States and UTs on the efficiency of their logistics ecosystem.**
- The index is based on indicators such as **infrastructure, services, timelines, traceability, competitiveness, security, operating environment and efficiency of regulatory processes.**
- The index uses **objective parameters** along with the **perception-based indicators** for index formulation.

Highlights of the Index

- **Gujarat** retained the top slot, amongst 21 States, on the logistics index chart, an indicator of the efficiency of logistical services necessary for promoting exports and economic growth. **Gujarat has been the top performer since 2018.**
- **Haryana, Punjab, Tamil Nadu and Maharashtra** occupied the second, third, fourth and fifth positions, respectively.
- Among the northeastern States and Himalayan Union Territories, **Jammu Kashmir** topped the chart. Among Union Territories, **Delhi** got the top position.
- While the first version of the report, LEADS 2018, focused on **export-import trade and assessed the efficiency of the logistics ecosystem**, the 2019 report covered **both international and domestic trade.**
- The LEADS 2021 report has taken the effort further by helping **identify problem areas in the sector and prepare policy responses** to deal with them. No ranking was released last year due to the Covid-19 pandemic.
- The inputs given by the LEADS Report 2021 can lead the way to **bring down logistics cost by 5 per cent** over the next 5 years from **almost 14% now.**

6) Climate Vulnerability Index

What's in the news?

- Delhi-based not-for-profit policy research institution **Council on Energy, Environment and Water (CEEW)** has released its first-of-its-kind district-level climate vulnerability assessment, or Climate Vulnerability Index (CVI), in which it has **analysed 640 districts in India to assess their vulnerability to extreme weather events** such as cyclones, floods, heatwaves, droughts, etc.

How is the Climate Vulnerability Index assessed?

- The CVI maps **exposure** (that is whether the district is prone to extreme weather events), **sensitivity** (the likelihood of an impact on the district by the weather event), and **adaptive capacity** (what the response or coping mechanism of the district is).
- It helps **map critical vulnerabilities and plan strategies to enhance resilience and adapt** by climate-proofing communities, economies and infrastructure.
- Instead of looking at climate extremes in isolation, the study **looks at the combined risk of hydro-met disasters**, which is **floods, cyclones and droughts, and their impact.** The study **does not take into consideration other natural disasters such as earthquakes.**

Why does India need a climate vulnerability index?

- According to **Germanwatch's Global Climate Risk Index**, India is the **seventh-most vulnerable country with respect to climate extremes.** Extreme weather events have been increasing in the country such as supercyclone Amphan in the Bay of Bengal, which is now the strongest cyclone to be recorded in the country. Recent events such as the landslides and floods in Uttarakhand and Kerala, have also increased in the past decade.

- Another CEEW study has found that **three out of four districts in India are extreme event hotspots**, with 40 per cent of the districts exhibiting a **swapping trend**, that is – traditionally flood-prone areas are witnessing more frequent and intense droughts and vice-versa.
- Further, the **Intergovernmental Panel on Climate Change (IPCC)** states that **every degree rise in temperature will lead to a three per cent increase in precipitation**, causing increased intensification of cyclones and floods.

What are the findings of the climate vulnerability index?

- According to CVI, **Assam, Andhra Pradesh, Maharashtra, Karnataka and Bihar are most vulnerable to extreme climate events** such as floods, droughts and cyclones in India.
- While **27 Indian states and union territories are vulnerable to extreme climate events**, **463 districts out of 640 are vulnerable to extreme weather events**.
- **More than 80 per cent Indians live in districts vulnerable to climate risks**.
- 60% of Indian districts have medium to low adaptive capacity in handling extreme weather events – these districts don't have robust plans in place to mitigate impact.
- **North-eastern states** are more vulnerable to floods.
- **South and central** are most vulnerable to extreme droughts.
- 59 and 41 per cent of the total districts in the **eastern and western states**, respectively, are highly vulnerable to extreme cyclones.

Which are the best performing states and why?

- The CVI has ranked **Kerala, Tripura and West Bengal as least vulnerable to extreme weather events**. The study points out that the difference in the vulnerability of states ranked is **marginal**, making all states vulnerable.

- But Kerala and west Bengal have performed well comparatively, despite both being coastal states and dealing with the threat of cyclones and floods annually. The reason why these states have performed better is because they have **stepped up their climate action plans as well as preparedness to handle an extreme weather event**.
- The Index takes into account certain indicators when assessing the preparedness of a state or district. These include **availability of critical infrastructure** like cyclone and flood shelters, **government mechanisms in place** including updating of disaster management plans, **mitigation strategies, standard operating procedures** before, during and after an extreme weather event such as how people and livestock are being evacuated or how food is being mobilised and how the administration prevents loss of lives and livelihoods.

What has compounded the impact of weather events?

- Apart from the **intensity and frequency** of extreme weather events which have increased in the country, the report finds that **“land disruptions”** have increased the impact of these events.
- Land disruptions primarily point to **anthropogenic activity** including change of land use, increased construction, reclaiming of land for development – resulting in the disappearance of forests, wetlands, mangroves and other such habitats.
- These ecosystems have traditionally acted as **natural buffers** against such extreme weather, reducing the impact. With their disappearance, the impact of the weather events have increased and are being felt more across the country.

What are the recommendations that have been made?

- Develop a **high-resolution Climate Risk Atlas (CRA)** to map critical

vulnerabilities at the district level and better identify, assess, and project chronic and acute risks such as extreme climate events, heat and water stress, crop loss, vector-borne diseases and biodiversity collapse. A CRA can also support **coastal monitoring and forecasting**, which are indispensable given the rapid intensification of cyclones and other extreme events.

- Establish a **centralised climate-risk commission** to coordinate the environmental de-risking mission.

- Undertake **climate-sensitivity-led landscape restoration** focused on rehabilitating, restoring, and reintegrating natural ecosystems as part of the developmental process.
- **Integrate climate risk profiling with infrastructure planning** to increase adaptive capacity.
- Provide for **climate risk-interlinked adaptation financing** by creating innovative CVI-based financing instruments that integrate climate risks for an effective risk transfer mechanism.

Polity

1) PESA Act

About PESA Act

- The Panchayat (Extension to the Scheduled Areas) Act, 1996, came into existence for **ensuring tribal self-rule for people living in fifth scheduled areas of India.**
- The PESA Act conferred the **absolute powers to Gram Sabha**, whereas state legislature has given an **advisory role** to ensure the proper functioning of Panchayats and Gram Sabhas.
- While the **73rd and the 74th Amendments** to the Indian Constitution passed in 1992 took the three-tier Panchayati Raj governance structure to rural and urban parts of the country, the Adivasi-dominated areas listed under the fifth schedule of the Constitution were **kept out of the purview of the Panchayati Raj Acts.**
- The PESA Act, enacted in 1996, took local self-governance rules to the areas listed under the fifth schedule. The fifth schedule areas, which deals with the administration of the districts dominated by the **Adivasi communities**, is in force in **10 states of the country.** These states include Jharkhand, Chhattisgarh, Odisha, Andhra Pradesh, Gujarat, Himachal Pradesh, Madhya Pradesh, Maharashtra, Rajasthan and Telangana.

Features of PESA Act, 1996

- In pursuance of this objective, PESA **empowers gram sabhas to play a key role in approving development plans and controlling all social sectors.**
- The PESA is considered to be the **backbone of tribal legislation in India.**
- State governments were required to amend their respective Panchayat Raj Acts without making any law that would be inconsistent with the mandate of PESA.

- **Following legal powers** have been given to Gram Sabha under PESA Act:

- ✓ **Safeguard and preserve the traditions and customs** of the people, their cultural identity, community resources and the customary mode of dispute resolution.
- ✓ **Approve plans, programmes and projects** for social and economic development before such plans, programmes and projects are taken up for implementation by the Panchayat at the village level.
- ✓ **Identification or selection of persons as beneficiaries** under the poverty alleviation and other programmes.
- ✓ **Right to be consulted before making acquisition of land** in the Scheduled Areas for development projects and before re-settling or rehabilitating persons affected by such projects in the Scheduled Areas.
- ✓ Right to plan and manage **minor water bodies** in the Scheduled Areas.
- ✓ Recommendations prior to **grant of prospecting licence or mining lease for minor minerals** and for grant of concession for the exploitation of minor minerals by auction in the Scheduled Areas.
- ✓ Power to **enforce prohibition or to regulate or restrict the sale and consumption of any intoxicant.**
- ✓ **Ownership of minor forest produce.**
- ✓ Power to prevent alienation of land in the Scheduled Areas and to restore any unlawfully alienated land of a Scheduled Tribe.
- ✓ Power to **manage village markets.**

- ✓ Power to exercise **control over money lending to the Scheduled Tribes.**
- ✓ Power to exercise **control over institutions and functionaries in all social sectors.**
- ✓ Power to **control over local plans and resources** for such plans including tribal sub-plans.
- The PESA Act thus enables **gram sabhas to maintain a safety net over their rights and surroundings** against external or internal conflicts.

Present Status of Act

- However, the law remains disempowered as **40% of the states under its purview have not been able to frame their rules for its implementation** even after 25 years of its existence.
- Once considered as one of the most powerful legislation supporting the **Adivasi community which constitutes around 9% of India's population**, a total of four states – Chhattisgarh, Jharkhand, Madhya Pradesh and Odisha have not even framed the rules yet.
- But even in the states where the rules were formulated, the situation is not different. States were supposed to amend their law incorporating the provisions of PESA but even though some states managed to formulate the rules they performed quite poorly on ensuring their implementation.

Pathalgadi Movement

- A study conducted by the **Indian Institute of Public Administration** (2017) in six districts of three states – Jharkhand, Chhattisgarh and Odisha, highlights the **poor implementation of the PESA Act.**
- For example: In the Khunti district of Jharkhand, 65% of people whose land was acquired in 2017-18 said they were not even asked about it. From the same Khunti district, the **Pathalgadi movement** began and spread to several

other districts and also to neighbouring states like Odisha and Chhattisgarh in 2017-2018.

- Pathalgadi is a practice adopted by many tribal villages to **declare their gram sabha as the only sovereign authority**, as per laws applicable in areas under fifth schedule of the Constitution.
- Under this practice, huge stone plaques, called Pathalgadi in the local dialect, were put up outside tribal settlements stating that laws made by the Parliament or the state Assembly were not applicable in the region, besides warning outsiders from entering, wandering, living or settling down in the village.
- The movement was, however, quelled in 2018, following police action and arrest of its leaders, most of who were charged with sedition.

Why in News?

- The Chhattisgarh government has started the process to frame the rules to implement the Provisions of the Panchayats (Extension to Scheduled Areas) Act, 1996.
- Since the PESA Act was passed, six states – Andhra Pradesh, Telangana, Himachal Pradesh, Maharashtra and Gujarat – have made rules while Chhattisgarh, Odisha, Madhya Pradesh and Jharkhand have yet to do so for implementation of the Act.

2) Transfer of Judges

Context

- The transfer of Chief Justice of the Madras High Court to the Meghalaya High Court has given rise to a controversy over the question whether judicial transfers are made only for administrative reasons or have any element of 'punishment' behind them.

What does the Constitution say on the transfer of judges?

- **Article 222** of the Constitution provides for the transfer of High Court judges, including the Chief Justice.
- It says the **President, after consultation with the Chief Justice of India**, may transfer a judge from one High Court to any other High Court. It also provides for a **compensatory allowance** to the transferred judge.
- This means that the executive could transfer a judge, but only after consulting the Chief Justice of India. From time to time, there have been proposals that one-third of the composition of every High Court should have judges from other States.

What is the Supreme Court's view on the issue?

- In **Union of India vs. Sankalchand Himatlal Sheth (1977)**, the Supreme Court rejected the idea that High Court judges can be transferred only with their consent. It reasoned that the transfer of power can be exercised **only in public interest**; secondly, the President is under an **obligation to consult the Chief Justice of India**, which meant that all relevant facts must be placed before the Chief Justice of India; and thirdly, that the Chief Justice of India had the **right and duty to elicit and ascertain further facts** from the judge concerned or others.
- In **S.P. Gupta vs. President of India (1981)**, also known as the 'Judges' Transfer Case' and, later, the **First Judges Case**, the Supreme Court ruled that consultation with the Chief Justice did not mean 'concurrence' with respect to appointments. In effect, it **emphasised the primacy of the executive in the matter of appointments and transfers**.
- However, this position was **overruled in the 'Second Judges Case' (1993)**. The **opinion of the Chief Justice of India**, formed after taking into account the **views of senior-most judges**, was to **have primacy**. Since then,

appointments are being made by the Collegium.

What is the current procedure for transfers?

- As one of the points made by the 'Second Judges Case' was that the **opinion of the Chief Justice of India ought to mean the views of a plurality of judges**, the **concept of a 'Collegium of Judges'** came into being.
- In the collegium era, the **consent of the judge is not required**.
- The recommendation is sent to the **Union Law Minister** who should submit the relevant papers to the **Prime Minister**. The Prime Minister then advises the **President** on approving the transfer.

What makes transfers controversial?

- Transfer orders become controversial when the Bar or sections of the public feel that there is a **punitive element** behind the decision to move a judge from one High Court to another. As a matter of practice, the Supreme Court and the government **do not disclose the reason for a transfer**.
- For, if the reason is because of some adverse opinion on a judge's functioning, disclosure would impinge on the judge's performance and independence in the court to which he is transferred.
- On the other hand, the absence of a reason sometimes gives rise to speculation whether it was effected because of complaints against the judge, or if it was a sort of punishment for certain judgments that inconvenienced the executive.

3) Tenure of CBI, ED chiefs extended to up to 5 years

About CBI

- The precursor to the Central Bureau of Investigation (CBI) was the **Special Police Establishment**, which was India's first agency to investigate

corruption. It was set in **1941** by the British.

- In **1963**, the Home Ministry expanded its power and changed its name to the **Central Bureau of Investigation**. It is governed by the **Delhi Special Police Establishment Act (DSPE), 1946**.
- The CBI was established with a view to investigate serious crimes related to Defence of India, corruption in high places, serious fraud, cheating and embezzlement and social crime, particularly of hoarding, black-marketing and profiteering in essential commodities, having all-India and inter-state ramifications.
- CBI acts as an **interface** between the law enforcement agencies of India and other countries to ensure cooperation. It facilitates exchange and sharing of information by these agencies.

Supervision over CBI

- The superintendence of CBI related to investigation of offences under the Prevention of Corruption Act, 1988 lies with the **Central Vigilance Commission (CVC)** and in other matters with the **Department of Personnel & Training (DOPT)** in the Ministry of Personnel, Pension & Grievances.

NIA vs. CBI

- The National Investigation Agency has been constituted after the Mumbai terror attack in **November 2008** mainly for investigation of incidents of terrorist attacks, funding of terrorism and other terror related crime, whereas CBI investigates crime of corruption, economic offences and serious and organized crime other than terrorism.

CBI Director

- The **Lokpal Act, 2013** governs the appointment of the CBI director.
- The CBI director is appointed by the Centre on the basis of the recommendation of a **search committee** comprising:

- the Prime Minister as the chairperson,
- the Chief Justice of India and
- the Leader of Opposition.

- In the absence of a formal Leader of Opposition in the Lok Sabha, **the leader of the floor of the largest opposition party** takes part in the search committee meetings.

About ED

- Enforcement Directorate (ED) is a specialized financial investigation agency under the **Department of Revenue, Ministry of Finance**, which enforces the following laws: -

- **Foreign Exchange Management Act, 1999 (FEMA)** - A Civil Law, with officers empowered to conduct investigations into suspected contraventions of the Foreign Exchange Laws and Regulations, adjudicate, contraventions, and impose penalties on those adjudged to have contravened the law.

- **Prevention of Money Laundering Act, 2002 (PMLA)** - A Criminal Law, with the officers empowered to conduct investigations to trace assets derived out of the proceeds of crime, to provisionally attach/confiscate the same, and to arrest and prosecute the offenders found to be involved in Money Laundering.

- ED was established in 1956 with its headquarters at **New Delhi**.
- The ED director is appointed as per provisions of the **Central Vigilance Commission Act, 2003**. The Centre appoints the director on recommendation of a committee, with the Central Vigilance Commissioner as chairperson.

Why in News?

- President Ram Nath Kovind has promulgated two ordinances that would allow the Centre to **extend the**

tenures of the directors of the Central Bureau of Investigation and the Enforcement Directorate from two years to up to five years.

- The ordinances pave the way for an incumbent director of CBI or ED to get **three extensions of one year each**, after his/her two year term ends. Any such extension will have to be **recommended by a committee**, recording in writing why it would be in **“national interest.”**
- While the change in tenure of the CBI Director was effected by amending the **Delhi Special Police Establishment Act, 1946**, the changes to the tenure of the ED Director was brought in by amending the **Central Vigilance Commission Act, 2003.**

4) Privilege Motion

What are Parliamentary privileges?

- Parliamentary privileges are certain rights and immunities enjoyed by members of Parliament, individually and collectively, so that they can **“effectively discharge their functions”**. When any of these rights and immunities is disregarded, the offence is called a **breach of privilege** and is punishable under law of Parliament.
- It should be noted that the parliamentary privileges **do not extend to the President** who is also an integral part of the Parliament.

Legal provisions

- The **powers, privileges and immunities** of either House of the Indian Parliament and of its Members and committees are laid down in **Article 105** of the Constitution.
- **Article 194** deals with the powers, privileges and immunities of the State Legislatures, their Members and their committees.
- Apart from the privileges as specified in the Constitution, the **Code of Civil Procedure, 1908**, provides for freedom

from arrest and detention of members under civil process during the continuance of the meeting of the House or of a committee thereof and forty days before its commencement and forty days after its conclusion.

- In addition to the above mentioned privileges and immunities each House also enjoys certain **Privileges based on Rules of Procedure and precedents** such as:

- ✓ The Chairman has a right to receive immediate information of the arrest, detention, conviction, imprisonment and release of a member on a criminal charge or for a criminal offence.
- ✓ Members or officers of the House cannot be compelled to give evidence or to produce documents in courts of law, relating to the proceedings of the House without the permission of the House.

- The Parliamentary houses also have **consequential powers** necessary for the protection of its privileges and immunities. These powers are:

- ✓ to commit persons, whether they are members or not, for breach of privilege or contempt of the House;
- ✓ to compel the attendance of witnesses and to send for persons, papers and records;
- ✓ to regulate its procedure and the conduct of its business;
- ✓ to prohibit the publication of its debates and proceedings and
- ✓ to exclude strangers.

What constitutes a breach of this privilege?

- While the Constitution has accorded special privileges and powers to parliamentarians and legislators to maintain the dignity and authority of the Houses, **these powers and privileges are not codified.**

- Thus, there are **no clear, notified rules to decide what constitutes a breach of privilege, and the punishment it attracts.**
- Any act that obstructs or impedes either House of the state legislature in performing its functions, or which obstructs or impedes any Member or officer of such House in the discharge of his duty, or has a tendency, directly or indirectly, to produce such results is treated as breach of privilege.
- It is a breach of privilege and contempt of the House to make **speeches or to print or publish false information** reflecting on the character or proceedings of the House, or its Committees, or on any member of the House for or relating to his character or conduct as a legislator.

Procedure to be followed

- The Legislative Assembly Speaker or Legislative Council Chairman constitutes a **Privileges Committee** consisting of 15 members in the Assembly and 10 members in the Council.
- The members to the committee are **nominated** based on the party strength in the Houses.
- The **Speaker or Chairman** first decides on the motions. If the privilege and contempt are found prima facie, then the Speaker or Chairman will forward it to the Privileges Committee by following the due procedure.
- The Committee, which has **quasi-judicial powers**, will seek an explanation from all the concerned, will conduct an inquiry and will make a recommendation based on the findings to the state legislature for its consideration.

Punishment

- If the Committee finds the offender guilty of breach of privilege and contempt, it can recommend the punishment. The punishment can include communicating the displeasure

of the state legislature to the offender, summoning the offender before the House and giving a warning, and even sending the offender to jail.

- In the case of the media, press facilities of the state legislature may be withdrawn, and a public apology may be sought.

Why in News?

- The opposition party of the Rajya Sabha has sought to move a privilege motion against a Member of Parliament.

5) Police reforms

What is the SC's Prakash Singh judgment on police reforms?

- Prakash Singh, who served as Director General of Police (DGP) of UP Police, filed a Public interest litigation (PIL) in the Supreme Court post retirement, in 1996, seeking police reforms.
- In a landmark judgment, the **Supreme Court (SC) in 2006 had directed all states and Union Territories to bring in police reforms.**
- The ruling issued a series of measures that were to be undertaken by the governments to ensure the police could do their work without worrying about any political interference.

What measures were suggested by the Supreme Court?

- The main directives from the Supreme Court in the verdict include fixing the tenure and selection of the DGP to avoid situations where officers about to retire in a few months are given the post.
- The court stated that the DGP of states should be appointed through a **merit-based transparent process** and secure a **minimum tenure of two years** to protect them against arbitrary transfers and postings. The court directed to ensure that the DGP of state police is appointed from amongst three senior-most officers who have been empanelled for the promotion by the Union Public Service Commission on

the basis of length of service, good record and experience.

- It specified that **other police officers on operational duties** (including superintendents of police in-charge of a district and station house officers incharge of a police station) should be provided a **minimum tenure of two years**.
- The apex court further directed establishing **Police Establishment Boards (PEB)** comprising police officers and senior bureaucrats to decide **transfers, postings, promotions and other service related matters** of officers of and below the rank of deputy superintendent of police, while making recommendations on postings and transfers of senior ranks.
- Further, there was a recommendation of setting up **State Police Complaints Authority (SPCA)**, with some independent members, to inquire into complaints against police officers in cases of serious misconduct, including custodial death, grievous hurt, or rape in police custody.
- Apart from this, the SC directed **separation of investigation and law and order functions** to better improve policing and setting up of **State Security Commissions (SSC)** that would have members from civil society. These commissions will lay down policy for police functioning, evaluate police performance, and ensure that state governments do not exercise unwarranted influence on the police.
- The court also directed forming a **National Security Commission** at the union level to prepare a panel for selection and placement of Chiefs of the Central Police Organisations (CPO) with a **minimum tenure of two years**.

How did states respond to these directives?

- The **Commonwealth Human Rights Initiative** (a non-governmental

organisation), in its report that tracked changes made in the police force following the 2006 judgment, found that **not even one state was fully compliant with the apex court directives**.

- According to a report of the **NITI Aayog** (2016), the composition and powers of the State Security Commissions and the Police Establishment Boards were at variance with the Supreme Court directions.
- For example, in states such as Bihar, Gujarat and Punjab, the State Security Commission were **dominated by government and police officers**. Further, many of these Commissions **did not have the power to issue binding recommendations**.

Why in News?

- Fifteen years after the Supreme Court had issued directions for police reforms, the National Human Rights Commission (NHRC) has asked the Union Ministry of Home Affairs and the State Governments to set up **Police Complaints Authorities** as per the judgment in Prakash Singh vs. Union of India, 2006.
- The **NHRC's core advisory group on criminal justice system reforms** has said there is an immediate need to set up police complaints authorities at the State/UT and district level as per the Supreme Court's directives.
- The core group recommended to the Ministry of Home Affairs and the States that the **status of compliance should be displayed on the websites** of the Ministry and the State Home Departments.
- The NHRC group also said the MHA and the Law Ministry should consider implementing the **recommendations of the 113th report of the Law Commission to add Section 114 B to the Indian Evidence Act**. This would ensure that in case a person sustains injuries in police custody, it is

presumed that the injuries were inflicted by the police and the burden of proof to explain the injury lies on the authority concerned.

- The group also recommended that the **Supreme Court's December 2020 order to install CCTV cameras with night vision in all police stations** should be implemented immediately to ensure accountability.
- Among the recommendations were the involvement of trained social workers and law students with police stations as part of **community policing** and **incorporating community policing in police manuals, laws and advisories**.
- According to data provided by the Home Ministry to the Lok Sabha in March, 16 States and UTs had implemented police complaints boards.

6) Mullaperiyar dam: The current dispute

Context

- The Supreme Court has recently directed that the maximum water level in Mullaperiyar dam should be 139.50 ft until November 10, following suggestions of the court-appointed supervisory committee.
- The dam is at the centre of a decades-old dispute: for **Kerala, where it is situated**, the dam presents a threat to lakhs living downstream; and for **Tamil Nadu, which owns and maintains the dam**, the water it provides is the lifeline of people in five districts.

Background of the Dispute

- The Maharaja of Travancore signed a **999-year Periyar Lake lease agreement** with the British government in 1886, for the construction of the Mullaperiyar dam across the river Periyar in the present Idukki district of Kerala. The reservoir is **within the Periyar Tiger Reserve**.
- The dam intends to **divert the waters of the west-flowing river Periyar**

eastward to the arid rain shadow regions of Tamil Nadu.

- **Concerns over the safety** of the gravity dam built using **lime-surkhi (burnt brick powder) mortar** came to the fore in 1979.
- In November that year, a tripartite meeting including the Central Water Commission (CWC) decided that the level had to be brought down from the full reservoir level of **152 feet to 136 feet** to enable Tamil Nadu, which owns and maintains it, to carry out dam strengthening works. By the mid-1990s, Tamil Nadu started demanding restoration of the level.

What happened in the legal battles?

- The Central Government set up an **expert committee** in 2000 to look into the dam's safety. The **committee recommended raising the level to 142 feet, which was endorsed by the Supreme Court** in 2006.
- Kerala sought to restrict the level to **136 feet** by way of an amendment to the **Kerala Irrigation and Water Conservation Act**, prompting the Tamil Nadu Government to move the Supreme Court. In 2010, the court constituted an **empowered committee** to study the whole gamut of issues concerning the dam.
- Based on the committee's finding that the dam was **"structurally and hydrologically safe"**, the Supreme Court, in 2014, **struck down Kerala's Act and allowed Tamil Nadu to maintain the level at 142 feet**. It also asked the Central Government to set up a **three-member Supervisory Committee** to monitor dam safety.

Why is it a social issue?

- Commissioned by the Kerala Government in the latter part of the 2000s, a **study by IIT-Roorkee raised questions about the survival of the dam**, located in **seismic zone-3**, in the event of an earthquake of a fairly high magnitude.

- The floods of 2018 and the erratic nature of annual monsoons ever since brought the focus back on the 126-year-old dam.
- Kerala has been demanding a **new dam** replacing the existing one, and located 366 ft downstream. While Kerala Governor Arif Mohammed Khan recently expressed his support to the idea, such a project would need the consent of Tamil Nadu.
- Construction of a new dam would also give rise to a demand for a **new water-sharing treaty**; at present, only Tamil Nadu has rights over the dam water.

International Relations

1) Goa Maritime Conclave

About GMC

- The Goa Maritime Conclave (GMC) is the **Indian Navy's outreach initiative** providing a multinational platform to harness the collective wisdom of practitioners of maritime security and the academia towards garnering outcome oriented maritime thought.
- The GMC aims to bring together the regional stakeholders and deliberate on the collaborative implementation strategies in dealing with contemporary maritime security challenges.

Why in News?

- The Indian Navy recently hosted the third edition of Goa Maritime Conclave – 2021.
- Navy Chiefs and Heads of Maritime Agencies of the Indian Navy and 12 other littoral states of the Indian Ocean Region (IOR) deliberated on the non-traditional threats in the Indian Ocean Region and other related issues.
- The theme for this year's edition of GMC is "**Maritime Security and Emerging Non-Traditional Threats: A Case for Proactive Role for IOR Navies**".

2) Asia-Europe Meeting

About ASEM

- The Asia-Europe Meeting (ASEM) was established as a **dialogue forum** in 1996 to **bridge Asia and Europe**.
- It is a platform for the countries in Asia and Europe to exchange views on regional and global issues and strengthen cooperation on a wide range of areas emanating from its **three pillars**:
 1. **Political and security,**
 2. **Economic and financial,**
 3. **Socio-cultural.**
- The ASEM grouping comprises 51 member countries (including **India**)

and 2 regional organizations - European Union and ASEAN.

- Countries in the grouping represent 65 per cent of global GDP, 60 per cent of the global population, 75 per cent of global tourism and 55 per cent of global trade.

Why in News?

- The 13th ASEM Summit was recently held virtually.
- The ASEM Summit is a **biennial event** alternating between country in Asia and Europe and is the foremost event of ASEM process to set its priorities for dialogue and cooperation between Asia and Europe in the areas of political, economic, financial, social, cultural, and educational issues of common interest in a spirit of mutual respect and equal partnership.

3) Charting a trade route after the MC12

CONTEXT

- The **World Trade Organization (WTO)**'s 12th Ministerial Conference (MC12), originally scheduled to start on November 30 in Geneva, has been postponed indefinitely due to COVID-19 travel restrictions.

THE OUTLOOK

- **Recent WTO estimates show that global trade volumes could expand by almost 11% in 2021, and by nearly 5% in 2022, and could stabilise at a level higher than the pre-COVID-19 trend.**
- The buoyancy in trade volumes has played an important role in supporting growth in economies such as India where domestic demand has not yet picked up sufficiently. This provides an **ideal setting for the Trade Ministers from the WTO member-states to revisit trade rules** and to agree on a work programme for the organisation,

which can help maintain the momentum in trade growth.

CONCERNS

Fisheries

- The discussions on fisheries subsidies have been hanging fire for a long time and in the present there has been considerable push for an early conclusion of an agreement to limit these subsidies.
- However, the **current drafts on this issue are completely unbalanced** as they **do not provide the finances to limit large-scale commercial fishing** that are depleting fish stocks the world over, but on the other hand, **threatening the livelihoods of small fishermen in countries such as India.**

e-Commerce

- Discussions on e-commerce have been held in the WTO since 1998, after the adoption of the **Ministerial Declaration on Global Electronic Commerce** wherein WTO members agreed to **“continue their practice of not imposing customs duties on electronic transmissions”**.
- In the present negotiating table there are issues relating to the liberalisation of the goods and services trade, and guarantee for free flow of data across international boundaries, all aimed at facilitating expansion of businesses of e-commerce firms.

Divisions over investment

- Complementing the current focus of the WTO to promote the global interests of oligopolies is the initiative for the adoption of an investment facilitation agreement.
- In 2001, the **Doha Ministerial Declaration** had included a **work programme on investment**, but it was soon taken off the table as **developing countries were opposed to its continuation** because the discussions were geared to expanding the rights of foreign investors through a multilateral agreement on investment.

- Now, investment facilitation has reintroduced the old agenda of concluding such an investment agreement.
- The ultimate objective of such facilitation is to **bind host governments into a multilaterally agreed commitment to comprehensively protect investor interests.**

One-sided negotiations

- Besides the bias in favour of global oligopolies, the **current negotiating processes in the WTO are fundamentally flawed.**
 - The negotiations on e-commerce and investment facilitation are being conducted not by a mandate given by the entire membership of the WTO in a transparent manner that are also consistent with the objectives of the WTO.
 - Instead, these negotiations owe their origins to the so-called **“Joint Statement Initiatives” (JSI)** in which a section of the membership has developed the agenda with a view to producing agreements in the WTO.
 - This JSI is then offered to the rest of the membership on a **“take-it-or-leave-it” basis.**
- This entire process is detrimental to the very existence of a rule-based multilateral trading system under the WTO.

IPRs and vaccine issue

- Despite WTO's intense discussion on the adoption of rules on electronic commerce, investment facilitation, and fisheries subsidies, there exists one issue that surmounts all others, namely, the WTO's response to demands that **technologies necessary for producing vaccines, medicines, and other medical products for COVID-19 treatment should be available without the restrictions imposed by intellectual property rights (IPRs).**

- From the very outset of the COVID-19 pandemic it had become clear that **IPRs protected using the provisions of the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) are formidable barriers** to ensuring equitable access to vaccines.
 - Pharmaceutical companies controlling the global markets have used monopoly rights granted by their IPRs to deny developing countries access to technologies and know-how, thus undermining the possibility of production of vaccines in these countries.
- **Availability of vaccines remains a critical problem** in these countries even after a year since the first dose of COVID-19 vaccine was administered.
 - Recent statistics show that until now, a mere **4.1% of the population in low-income countries have received at least one dose of the vaccine.**
- Contrary to this, the **involvement of developing countries in vaccine production could have increased supplies** of affordable vaccines to the low-income countries.

INDIA-SOUTH AFRICA PROPOSAL

- To remedy this situation of inequity, India and South Africa had tabled a proposal in the WTO in October 2020.
- The proposal proposed to **create timely access to affordable medical products by waiving enforcement of several forms of IPRs** on “health products and technologies including diagnostics, therapeutics, vaccines, medical devices and their methods and means of manufacture” useful for COVID-19 treatment.
- The proposal was supported by nearly two-thirds of the organisation’s membership, but was **opposed by the developed countries** battling for their corporations.

- However, the limited support to the proposal from the U.S. Administration, have enlightened glimmers of hope that WTO members would agree to lift restrictions on access to technologies for COVID-19 vaccines and medicines; at least by the MC12.

CONCLUSION

- The MC12 needs to consider how in these good times for trade, the economically weaker countries “can secure a share in the growth in international trade commensurate with the needs of their economic development”, an objective that is mandated by the **Marrakesh Agreement** establishing the World Trade Organization.

4) Supply Chain Resilience Initiative

Background

- In a move to counter China’s dominance of the supply chain in the Indo-Pacific region, **India, Japan and Australia** launched the Supply Chain Resilience Initiative (SCRI) in April 2021.
- The initiative is committed to **building resilient supply chains in the Indo-Pacific** in the aftermath of COVID-19 pandemic.
- Initially, SCRI will focus on sharing best practices on supply chain resilience and holding investment promotion events and buyer-seller matching events to provide opportunities for stakeholders to explore the possibility of **diversification of their supply chains.**

Significance

- In the context of international trade, supply chain resilience is an approach that **helps a country to ensure that it has diversified its supply risk across a clutch of supplying nations instead of being dependent on just one or a few.**

- The COVID-19 pandemic has marked the need to address weaknesses of several traditional supply chains. The imposition of lockdowns and halt in production across locations **severely affected global distribution of inputs and final products.**
- In the beginning, the effect was mostly confined to products sourced from China. With more countries pausing industrial production, other supply chains encountered severe disruptions.
- Built over decades on principles of economic efficiency, regional supply chains were clearly **incapable of handling exogenous shocks of the magnitude inflicted by COVID-19.** The need for restructuring them, in order to make them more resilient to unexpected disruptions, has been a fundamental lesson imparted by the pandemic.

Strategic Reasons

- For major Indo-Pacific economies like India, Japan, and Australia, it has become essential to diversify sourcing across various segments of different supply chains in order to minimize risks from disruption and enhance resilience. In this respect, their deep trade and economic relations with **China** need to be reduced to avoid future production disruptions.
- Restructuring supply chains away from China became a major objective for these countries as concerns increased over **security risks associated with production networks** significantly embedded in, or connected to, China.
- By **disengaging strategic supply chains** — semiconductors, automobiles, pharmaceuticals, and telecommunications — from China, and repositioning them substantially in countries without security threats, proponents of the RSCI hope to **decouple from China in a broader strategic sense.**
- Another purpose behind the organized effort to decouple is also to **develop a coalition of like-minded countries for taking on an assertive China in the Indo-Pacific.**

Roadmap of RSCI

- **Financial incentives** are crucial for repositioning supply chains. Businesses, including lead firms, vendors, and distributors across various supply chains, would have to be compensated for migrating to locations much less efficient than China.
- **Japan** is offering subsidies to its businesses for relocation from China. While these were initially being offered for relocating back to Japan, and also to Southeast Asia, India and Bangladesh have lately been added to locations eligible for subsidies.

Potential of RSCI

- The RSCI's long-term success depends significantly on the extent to which Japan, India, Australia, and Southeast Asian countries join it and are able to work out common rules for effective growth of supply chains.
- The RSCI is one of the first examples of a **distinct anti-China geoeconomic alliance** taking shape in the post-COVID-19 world.
- The new initiative also symbolizes **segregation of global and regional supply chains along geopolitical lines.** It points to the wider possibility of the post-COVID-19 global economic order being fashioned into distinct blocs of cross-border production networks representing specific political alliances. Its success might spur more such initiatives elsewhere.

Why in News?

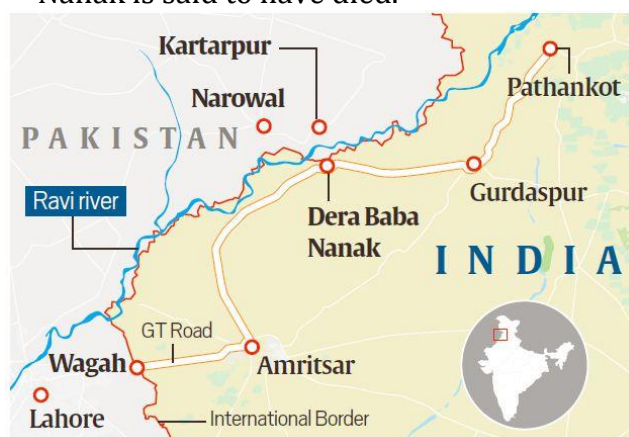
- Prime Minister Narendra Modi recently attended an event hosted by US President Joe Biden on the Supply Chain Resilience initiative.

Art and Culture

1) Kartarpur Corridor

About Kartarpur Corridor

- The corridor facilitates travel of Indian Sikh pilgrims to the Gurdwara Darbar Sahib in Kartarpur, Pakistan.
- The Kartarpur Corridor was first **proposed** in early 1999 by **Atal Bihari Vajpayee** and **Nawaz Sharif**, the Prime Ministers of India and Pakistan respectively.
- The corridor was inaugurated in 2019 to **commemorate the 550th birth anniversary celebrations of Guru Nanak Dev**.
- It is located on the right bank of the **Ravi River**.
- It is in Kartarpur Sahib that Guru Nanak Dev had spent the last 18 years of his life. The gurdwara is built where Guru Nanak is said to have died.



About Guru Nanak (1469–1539)

- **Founder** of Sikhism and is the **first of the ten Sikh Gurus**.
- He advocated a form of **nirguna bhakti** (devotion to and worship of the Divine as formless).
- He rejected the external practices of the religions he saw around him. He rejected sacrifices, ritual baths, image worship, austerities and the scriptures of both Hindus and Muslims.
- Nanak's teachings can be found in the Sikh scripture **Guru Granth Sahib**, as a collection of verses recorded in Gurmukhi.

Why in News?

- The government has decided to reopen the Kartarpur Corridor with Pakistan ahead of the upcoming Gurdpurab, the birth anniversary of first Sikh guru Guru Nanak.

2) Srinagar as “Creative City”

UNESCO Creative City Network

- The UNESCO Creative Cities Network (UCCN) was created in 2004 to **promote cooperation with and among cities that have identified creativity as a strategic factor for sustainable urban development**.
- The cities which currently make up this network work together towards a common objective: **placing creativity and cultural industries at the heart of their development plans at the local level and cooperating actively at the international level**.
- The Network covers seven creative fields: **Crafts and Folk Arts, Media Arts, Film, Design, Gastronomy, Literature and Music**.
- By joining the Network, cities commit to sharing their best practices and developing partnerships involving the public and private sectors as well as civil society.

Why in News?

- UNESCO has selected **Srinagar** as part of the creative city network under the **Crafts and Folk Arts category**.
- With the inclusion of 49 new cities this year, total numbers of cities in this network stands at 295 from across 90 countries.
- Srinagar is the **sixth Indian city** to be selected as a part of UCCN.

How does the inclusion benefit Srinagar?

- The inclusion is likely to pave the way for the city to represent its handicrafts on the global stage through UNESCO.

- It will also help it in international funding, tie-ups with craft universities and pitching craft as a product.

Other Indian cities that have joined UCCN

- **Mumbai – Film**
- **Hyderabad – Gastronomy**
- **Chennai – Creative city of Music**
- **Jaipur – Crafts and Folk Arts**
- **Varanasi – Creative city of Music.**

Defence

1) Defence Acquisition Council

About DAC

- The Defence Acquisition Council (DAC) is **constituted under the Ministry of Defence (MoD) for overall guidance of the defence procurement planning process.**
- It includes **Defence Minister as Chairman** and Minister of State for Defence (when appointed), Chief of Defence Staff (CDS), Chiefs of triservices, Defence Secretary, Secretary Dept. of Defence Production and Supplies, Secretary Defence Research & Development, Secretary Defence Finance, Vice Chief of Defence Staff (when appointed) and Secretary (Acquisition) as members.
- The DAC is the **highest decision-making body** in the defence ministry for deciding on new policies and capital acquisitions for the three services and the Indian Coast Guard.
- The objective of the DAC is to ensure expeditious procurement of the approved requirements of the Armed Forces in terms of capabilities sought, and time frame prescribed, by optimally utilizing the allocated budgetary resources.

Why in News?

- The Defence Acquisition Council approved capital acquisition proposals for modernisation and operational needs of the Armed Forces amounting to Rs 7,965 crore. All of these proposals (100%) are under the '**Make in India**' programme with focus on design, development and manufacturing in India.

About 'Make in India'

- 'Make in India' is an initiative which was launched in 2014, to facilitate investment, foster innovation, build best-in class infrastructure, and **make India a hub for manufacturing, design, and innovation.**

- Make in India initiative has made significant achievements and presently focuses on **27 sectors** (such as Aerospace and Defence, Pharmaceuticals and Medical Devices, Textile and Apparels, Leather & Footwear, Food Processing, Tourism and Hospitality Services, Transport and Logistics Services, etc.) under **Make in India 2.0.**

2) INS Vela

What's in the news?

- Vela, the fourth submarine of **Project 75** of the Indian Navy, was commissioned recently.

About INS Vela

- It is a **diesel-electric attack submarine.**
- The submarine is equipped with C303 anti torpedo countermeasure system, and can carry up to 18 torpedoes or Exocet anti-ship missiles or 30 mines in place of torpedoes.
- It also has a **Permanently Magnetized Propulsion Motor** that is completely silent.
- The submarine can engage in **offensive operations across the entire spectrum of naval warfare**, including anti-surface warfare, anti-submarine warfare, intelligence gathering, mine laying and area surveillance.

What is Project 75?

- Project 75 entails the **construction of six Scorpene-class submarines.** Three of the six submarines, **Karanj, Kalvari, and Khanderi**, have already been commissioned.
- The fifth submarine, **Vagir**, was launched in 2020 and is undergoing sea trials while the sixth one **Vagsheer** is in advanced stage of outfitting.
- The submarines are being built at the **Mazagon Dock Limited** (Public Sector Undertaking situated in Mumbai) with

technology assistance from the Naval Group of France.

About Scorpene class submarines

- The Scorpene class submarines are one of the most **advanced conventional submarines** in the world. The submarine has **superior stealth features**, such as advanced acoustic silencing techniques, low radiated noise levels and ability to attack with precision-guided weapons on board.
- The Indian Navy intends to use the submarines for missions such as **area surveillance, intelligence gathering, anti-submarine warfare, anti-surface warfare and minelaying operations.**

Conventional vs. Nuclear-powered Submarines

- Submarines can either be **conventional-powered** (mainly diesel-electric) **or nuclear-powered, both types can carry nuclear warheads.**
- Diesel-electric submarines **use electric motors charged by diesel engines to**

move. These engines require air and fuel to operate, which means they **need to resurface more frequently, making them easier to detect.** When running on electric mode, these submarines are **much quieter** than when the diesel engines are running.

- Most submarines today are conventionally powered and tend to be **smaller and cheaper to maintain.**
- Nuclear-powered submarines **run off of steam generated by an onboard nuclear reactor** that turns the turbines. Having a source of power that runs for so long means that they **can remain submerged for years** – effectively limited only by the food and water needs of their crews – **limiting their detection.**
- These **tend to be larger but require more expensive infrastructure and maintenance.**

Nobel Prize 2021

1) Nobel Prize for Medicine

What's in the news?

- Two U.S. based scientists (David Julius and Ardem Patapoutian) have been awarded the Nobel Prize in physiology or medicine for their **discovery of the receptors that allow humans to feel temperature and touch.**

About their work

- Mr. Julius and Mr. Patapoutian focused their work on the **field of somatosensation**, that is the **ability of specialised organs such as eyes, ears and skin to see, hear and feel.**
- Mr. Julius used **capsaicin**, the active component in chilli peppers, to identify the nerve sensors that allow the skin to respond to heat.
- Mr. Patapoutian found separate pressure-sensitive sensors in cells that respond to mechanical stimulation.
- Impressions of temperature, touch and movement are feelings relying on somatosensation. Somatosensation is a collective term for the sensations of touch, temperature, body position, and pain recognized through neural receptors in the skin and certain internal organs.
- Such information continuously flows from the skin and other deep tissues and connects us with the external and internal world.

2) Physics Nobel

What's in the news?

- U.S.-Japanese scientist Syukuro Manabe, Klaus Hasselmann of Germany and Giorgio Parisi of Italy have won the Nobel Physics Prize for **climate models and the understanding of physical systems.**

About their respective work

- Syukuro Manabe and Klaus Hasselmann were cited for their work in the **physical modeling of Earth's climate,**

quantifying variability and reliably predicting global warming.

- Mr. Manabe demonstrated **how increases in the amount of carbon dioxide in the atmosphere would increase global temperatures**, laying the foundations for current climate models. Mr. Hasselmann created a **model that linked weather and climate**, helping explain why climate models can be reliable despite the seemingly chaotic nature of the weather. He also developed ways to look for **specific signs of human influence on the climate.**
- The second half of the prize was awarded to Giorgio Parisi for the discovery of the **interplay of disorder and fluctuations in physical systems from atomic to planetary scales.**
- Mr. Parisi built a physical and mathematical model that made it possible to understand complex systems in fields as different as mathematics, biology, neuroscience and machine learning.

3) Chemistry Nobel

What's in the news?

- The Nobel Prize for chemistry for the year 2021 has been awarded to German scientist Benjamin List and Scotland-born scientist David WC MacMillan.

About their work

- They were cited for their work in developing a **new way for building molecules** known as **"asymmetric organocatalysis".**
- Many research areas and industries are dependent on chemists' ability to construct molecules that can form elastic and durable materials, store energy in batteries or inhibit the progression of diseases. This work requires **catalysts.**
- **Catalysis** is the increase in the rate of a chemical reaction by the addition of a

reagent — the catalyst — that is not itself consumed.

- Catalysts are thus fundamental tools for chemists, but researchers long believed that there were, in principle, **just two types of catalysts available: metals and enzymes**.
- Benjamin List and David MacMillan developed a **third type of catalysis**. It is called **asymmetric organocatalysis and builds upon small organic molecules**.
- Organic catalysts have a stable framework of carbon atoms, to which more active chemical groups can attach.
- These often contain **common elements** such as oxygen, nitrogen, sulphur or phosphorus. This means that these catalysts are both **environmentally friendly and cheap to produce**.
- Before asymmetric catalysis, man-made catalysed substances would often contain not only the desired molecule but also its unwanted mirror image.

4) Nobel Prize in Literature

What's in the news?

- Tanzanian-born novelist Abdulrazak Gurnah, whose work focuses on colonialism and the trauma of the refugee experience, won the Nobel Literature Prize for 2021.

About his work

- Mr. Gurnah, who grew up on the island of Zanzibar but who arrived in England as a refugee, is the **fifth African to win the Nobel Literature Prize**.
- Mr. Gurnah was honoured "for his uncompromising and compassionate penetration of the effects of colonialism and the fate of the refugee in the gulf between cultures and continents".

5) Nobel Peace Prize

What's in the news?

- The Nobel Committee has decided to award the Nobel Peace Prize for 2021 to Maria Ressa and Dmitry Muratov for

their **efforts to safeguard freedom of expression**, which is a precondition for democracy and lasting peace.

About their work

- Ms Ressa and Mr Muratov are receiving the Peace Prize for their **courageous fight for freedom of expression in the Philippines and Russia**.
- In 2012, Ressa co-founded Rappler, a news website critical of the Philippine government. Muratov was one of the founders in 1993 of the independent Russian newspaper Novaya Gazeta.