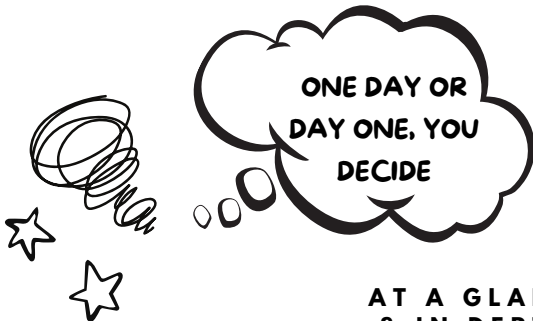


OFFICERS' PULSE

Issue no. 42 | 13th March to 19th March, 2022



**AT A GLANCE
& IN DEPTH.**

COVERAGE.

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News @ a glance

POLITY

1) MGNREGA

About the scheme

- The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) scheme is the largest social security scheme in the world — guaranteeing **100 days of work** each financial year to **any rural household** willing to do public work-related unskilled manual work at the statutory minimum wage.
- The act makes it **obligatory** for the State to give rural households work on demand. In case such employment is not provided within 15 days of registration, the applicant becomes eligible for an **unemployment allowance**.
- The **Ministry of Rural Development (MRD)** is monitoring the entire implementation of this scheme in association with state governments.

Key Features

- **One-third** of the stipulated workforce must be women.
- **Work site facilities** such as creche, drinking water and shade have to be provided.
- The employment will be provided **within a radius of 5 km**: if it is above 5 km extra wage will be paid.
- The wages are revised according to the **Consumer Price Index-Agricultural Labourers (CPI-AL)**.
- A **60:40 wage and material ratio** has to be maintained.
- Permissible works predominantly include water and soil conservation, afforestation and land development works.
- **Work site facilities** such as crèche, drinking water, shade have to be provided.

- **Gram sabhas** must recommend the works that are to be undertaken and at least 50% of the works must be executed by them.
- **Social Audit** has to be done by the Gram Sabha.

Funding

- Funding is shared between the centre and the states.
- The funding pattern of the scheme comprises 100% funding for unskilled labour cost and 75% of the material cost by Central Government and rest shall be borne by the State Government.

Why in News?

- According to a Parliamentary Standing Committee report submitted to the Lok Sabha recently, fake job cards, widespread corruption, late uploading of muster rolls, and huge pending payments for wages and materials are among the issues hampering the MGNREGA scheme, apart from insufficient funding.
- It noted that the intent of a demand-driven scheme for the marginalised was defeated when pending wages amounted to ₹4,060 crore, while material component payments are pending to the tune of ₹9,000 crore. The panel found it alarming that in such a scenario, the budget estimates for the scheme for 2022-23 were reduced from the ₹78,000 crore sought by the Department of Rural Development, to ₹73,000 crore.

2) Finland crowned world's happiest nation for fifth year

What's in the news?

- **Finland** has been named the world's happiest country for the fifth year

running, in an annual UN-sponsored index that ranked **Afghanistan** as the unhappiest, closely followed by **Lebanon**.

- Bulgaria, Romania and Serbia recorded the biggest boosts in wellbeing. The largest falls in the World Happiness table came in Lebanon, Venezuela and Afghanistan.
- **Northern Europeans** once again dominated the top spots — with the Danes second to the Finns, followed by the Icelandic, the Swiss and the Dutch.
- The United States rose three places to 16th, one ahead of Britain. France climbed to 20th, its highest ranking yet.
- This year the authors also used data from social media to compare people's emotions before and after the COVID-19 pandemic. They found **strong increases in anxiety and sadness** in 18 countries but a fall in feelings of anger.

About the Index

- The World Happiness Report, now in its 10th year, is **based on people's own assessment of their happiness, as well as economic and social data**.
- It assigns a happiness score on a **scale of zero to 10**, based on an average of data over a three-year period.
- As well as a personal sense of wellbeing, based on Gallup polls in each country, the happiness score takes account of **GDP, social support, personal freedom and levels of corruption**.
- This latest index covered 146 countries.

3) National Commission for Scheduled Tribes

About NCST

- The National Commission for Scheduled Tribes (NCST) was established by **amending Article 338** and **inserting a new Article 338A** in the Constitution through the **Constitution (89th Amendment) Act, 2003**.
- By this amendment, the erstwhile National Commission for Scheduled

Castes and Scheduled Tribes was replaced by two separate Commissions namely- **(i) the National Commission for Scheduled Castes (NCSC), and (ii) the National Commission for Scheduled Tribes (NCST)**.

- The **term of office of Chairperson, Vice-Chairperson and each member is three years** from the date of assumption of charge.
- The **Chairperson** has been given the **rank of Union Cabinet Minister**, and the Vice-Chairperson that of a Minister of State and other Members have the rank of a Secretary to the Government of India.

Functions of the Commission

1. To investigate & Monitor matters relating to Safeguards provided for STs under the Constitution or under other laws or under Govt. Order, to evaluate the working of such Safeguards.
2. To inquire into specific complaints relating to Rights & Safeguards of STs;
3. To participate and Advise in the Planning Process relating to Socio-economic development of STs, and to Evaluate the progress of their development under the Union and any State;
4. To submit report to the President annually and at such other times as the Commission may deem fit, upon/working of Safeguards, Measures required for effective implementation of Programmers/ Schemes relating to Welfare and Socio-economic development of STs;
5. To discharge such other functions in relation to STs as the President may, subject to the provisions of any law made by Parliament, by rule specify.

Powers of the Commission

- For Investigation and Inquiry, the Commission is **vested with powers of a civil court having authority to:**
 - Summon and enforce attendance of any person and examine on oath;
 - Discovery & production of any documents;
 - Receive evidence on affidavits;

- Requisition any public record or copy thereof from any court or office;
- Issue Commissions for examination of witnesses and documents; and
- Any matter which President, by rule, may determine.

Why in News?

- The Standing Committee on Social Justice and Empowerment in its report to the Parliament has submitted that the **National Commission for Scheduled Tribes has been dysfunctional for the past four years and has not delivered a single report to Parliament.**
- The commission is vested with all the powers of a civil court while investigating any matter on inquiring into any complaint relating to deprivation of rights and safeguards for the Scheduled Tribes.
- The Standing Committee expressed dismay over the **near paralysis of the commission's working due to manpower and budgetary shortage.**
- In the financial year 2021-22, NCST has met only four times. Its rate of pendency of resolution of complaints and cases that it receives is close to 50%.

4) Maternal Mortality Rate drops in India

What's in the news?

- According to the **latest Sample Registration System (SRS) special bulletin on maternal mortality in India (2017-19)**, brought out by the office of the Registrar General of India, the **Maternal Mortality Ratio (MMR) of India has declined by 10 points.**
- It has declined from 113 in 2016-18 to **103 in 2017-19** (8.8 % decline). The country had been witnessing a progressive reduction in the MMR from 130 in 2014-2016, 122 in 2015-17, 113 in 2016-18, and to 103 in 2017-19.
- With this persistent decline, India was on the **verge of achieving the**

National Health Policy (NHP) target of 100/lakh live births by 2020 and certainly on track to achieve the **Sustainable Development Goal (SDG) target of 70/ lakh live births by 2030.**

- The **number of States that have achieved the SDG target has now risen from five to seven** -- Kerala (30), Maharashtra (38), Telangana (56), Tamil Nadu (58), Andhra Pradesh (58), Jharkhand (61), and Gujarat (70).

Kerala's Achievement

- The bulletin notes that **Kerala** has yet again emerged on top when it comes to maternal and child health, with the State recording the **lowest Maternal Mortality Ratio (MMR) of 30 (per one lakh live births)** in the country.
- Kerala's achievement is a result of a decade of sustained efforts at properly assessing the cause of maternal mortality in the State and taking up targeted initiatives to tackle each of these.
- It developed the **Quality Standards in Obstetric Care**, in partnership with the NICE International and leading specialists in 2012-13 and focussed on the **management of some of the common causes of maternal deaths** - - postpartum haemorrhage (PPH), pregnancy-induced hypertension (PIH), sepsis, and amniotic fluid embolism.
- Encouraging achievement has been reported by **Uttar Pradesh** -- which has shown the maximum decline of 30 points, Rajasthan (23 points), Bihar (19 points), Punjab (15 points) and Odisha (14 points).

5) Karnataka High Court's hijab verdict

What's in the news?

- In its judgment upholding restrictions on Muslim women wearing hijabs in educational institutions, the Karnataka High Court held that wearing the headscarf is **not an "essential religious practice" in Islam.**

- The court dismissed the petitions challenging an order on school uniforms by the Government Pre-University (PU) College for Girls in Udupi that banned the hijab, as well as the Karnataka government order that extended its support to the restriction.

What does the 'essential religious practice' test mean?

- **Article 25** of the Constitution guarantees the "freedom of conscience and the right freely to profess, practise and propagate religion". However, **this right isn't absolute and is subject to public order, morality, health, and other fundamental rights.**
- While Article 25 itself does not read any other condition into the protection of this right, courts, over the years, have ruled that the **right would protect only "essential religious practices"** and not all religious practices. So, this test decides which religious practices are protected under the Constitution.
- Courts have adopted varied approaches to the test over the years. In some cases, they relied on **religious texts to determine essentiality**, in others on the **empirical behaviour of followers**, and in a few, on whether the practice in question **existed at the time the religion originated.**

Previous Instances

- In 2004, the Supreme Court applied the test of essential religious practices in deciding whether the **Tandava dance was an essential rite of the Ananda Marga Faith.** It ruled that the faith had come into existence in 1955, while the Tandava dance was adopted only in 1966. The court, therefore, ruled that since the faith had existed before the adoption of the dance, the latter **cannot be considered an essential feature of the faith.**
- In 2016, the Bombay High Court **permitted women to enter the sanctum sanctorum of the Haji Ali Dargah**, ruling that the Haji Ali Dargah Trust's decision to exclude them was illegal and unconstitutional. In its judgment, the court ruled that the Trust had failed to place any material

on record to demonstrate that the exclusion of women from dargahs was an "essential feature" of Islam.

- More recently, in 2017, the Supreme Court ruled that **triple talaq was not an essential practice of Islam** and could not be offered constitutional protection under Article 25.
- A year later in 2018, the Supreme Court in the **Sabarimala case** rejected the claim of 'Ayyappans' (pilgrims) that the exclusion of women between the age of 10 and 50 from entering the temple constituted an essential practice.

Why hijab 'isn't an essential part of Islam'

- As for the Karnataka High Court judgment, it has held that wearing the hijab does not constitute an essential religious practice under Islam — which means it can be regulated by the state.
- To reach this conclusion, the court referred to a commentary on the Quran and held that there is **no "Quranic injunction" or mandate on wearing the hijab.**
- The court therefore concluded that wearing of hijab by Muslim women does not form a part of essential religious practice in Islamic faith.

Future of the test uncertain

- The test has, however, faced criticism on several occasions. **Justice D.Y. Chandrachud** in the Sabarimala case had lamented that "compulsions nonetheless have led the court to don a theological mantle".
- The future of the test is also uncertain at the moment. This is after the Supreme Court, while considering review petitions in the Sabarimala case, referred seven questions to a larger bench.
- A nine-judge bench is set to re-evaluate the "essential religious practice test", among other issues related to Constitutional morality, and the interplay between freedom of religion under the Constitution and other fundamental rights.

For doubts and queries email us at doubts@officerspulse.com

ENVIRONMENT

1) Rs.19,000 Cr. Afforestation Plan launched

What's in the news?

- The Centre has launched a **₹19,000-crore project to rejuvenate 13 major rivers by planting trees.**
- The rivers are the **Jhelum, Chenab, Ravi, Beas, Sutlej, Yamuna, Brahmaputra, Luni, Narmada, Godavari, Mahanadi, Krishna and Cauvery** funded by the National Afforestation & Eco-development Board, MoEF&CC.
- The **State Forest Departments** will be the key implementing agencies with convergence of schemes of other line departments in the States.

News in detail

- The 13 rivers collectively cover a basin area of 18,90,110 sq. km. or about **57.45% of the geographical area.** Their length including 202 tributaries within the delineated surroundings is 42,830 km.
- They would help **recharge groundwater, reduce sedimentation, generate ₹449.01 crore from non-timber and other forest produce as well as provide employment of 344 million man-days.**
- The document prepared by the **Indian Council of Forestry Research & Education, Dehradun, (ICFRE),** proposes many kinds of afforestation for the rivers which include timber species, medicinal plants, grasses, shrubs and fuel fodder and fruit trees.
- Site specific treatments in terms of soil & moisture conservation and plantations of grasses, herbs, forestry and horticultural trees have been proposed for treatment of prioritized sites in the riverscape supported by GIS technique based on consultations with various stakeholders.
- These efforts would help India meet its international climate commitments of

creating an additional **carbon sink of 2.5 -3 billion tonnes of CO2 equivalent** through additional forest and tree cover by 2030 under the Paris Agreement of the UNFCCC; **restore 26 million hectares of degraded lands by 2030** and halt biodiversity loss by 2030 under CBD and Sustainable Development Goals.

2) India's Solar Capacity: Milestones and Challenges

An Overview

- India added a record **10 Gigawatt (GW) of solar energy** to its cumulative installed capacity in 2021. This has been the highest 12-month capacity addition, recording nearly a **200% year-on-year growth.**
- India has now **surpassed 50 GW of cumulative installed solar capacity,** as on 28 February 2022.
- This is a milestone in India's journey towards generating 500 GW from renewable energy by 2030, of which **300 GW is expected to come from solar power.**
- India's capacity additions rank the country **fifth in solar power deployment,** contributing nearly 6.5% to the global cumulative capacity of **709.68 GW.**

State of India's domestic solar module manufacturing capacity

- Domestic manufacturing capacities in the solar sector **do not match up to the present potential demand** for solar power in the country.
- According to **Crisil's report,** as on March 31, 2021, India had **3 GW capacity for solar cell production and 8 GW for solar panel production capacity.**
- However, **backward integration in the solar value chain is absent** as India has no capacity for

manufacturing solar wafers and polysilicon.

- In 2021-22, **India imported nearly \$76.62 billion worth solar cells** and modules from China alone, accounting for 78.6% of India's total imports that year.
- Low manufacturing capacities, coupled with cheaper imports from China have rendered Indian products uncompetitive in the domestic market.

Why is India falling short in Roof-top Solar Installments?

- The steep rise in large, ground-mounted solar energy is indicative of the strong push towards increasing the share of **utility-scale solar projects** across the country.
- RTS deployment stands at **6.48 GW in 2021**, far short of the Union Government's target of 40 GW of RTS by end 2022.
- The large-scale solar PV focus fails to exploit the many benefits of **decentralized renewable energy (DRE) options**, including reduction in transmission and distribution (T&D) losses.
- One of the primary benefits of solar PV technology is that it can be **installed at the point of consumption**, significantly reducing the need for large capital-intensive transmission infrastructure.
- India needs to deploy both large and smaller-scale solar PV, and particularly needs to expand roof top solar (RTS) efforts.
- There is **limited financing for residential consumers and Small and Medium Enterprises (SMEs)** who want to install RTS.
- Increased awareness, and affordable finance for RTS projects could potentially ensure the spread of RTS across the scores of SMEs and homes around the country. Aggregating roof spaces could also help **reduce overall costs of RTS installations** and enable developing economies of scale.

What are the challenges to India's solar power capacity addition?

- Despite significant growth in the installed solar capacity, the

contribution of solar energy to the country's power generation has not grown at the same pace.

- **Eg:** In 2019-20, for instance, solar power contributed only 3.6% (50 billion units) of India's total power generation of 1390 BU.
- The major concern lies in, of the 50 GW installed solar capacity, an overwhelming **42 GW comes from ground-mounted solar photovoltaic (PV) systems, and only 6.48 GW comes from roof top solar (RTS); and 1.48 GW from off-grid solar PV.**
- The utility-scale solar PV sector continues to face challenges like **land costs, high T&D losses and other inefficiencies, and grid integration challenges.**
- There have also been conflicts with **local communities and biodiversity protection** norms.
- While India has achieved record low tariffs for solar power generation in the utility-scale segment, this has not translated into cheaper power for end-consumers.

Way Forward

- India needs to embrace a **circular economy model** for solar systems which would allow **solar PV waste to be recycled and reused in the solar PV supply chain by the end of 2030** as India will likely produce nearly 34,600 metric tonnes of solar PV waste.
- The International Renewable Energy Agency (IRENA) estimates that the global value of recoverable materials from solar PV waste could exceed \$15 billion. In this scenario, India could look at **developing appropriate guidelines around Extended Producer Responsibility (EPR)**, which means holding manufacturers accountable for the entire life cycle of solar PV products and creating standards for waste recycling.
- This could give **domestic manufacturers a competitive edge** and go a long way in addressing waste management and supply side constraints.

- In addition to an impressive domestic track record, through the **International Solar Alliance (ISA) established by India and France at COP-21 in 2015**, there is a global platform to bring countries together to **facilitate collaboration** on issues such as mobilizing investments, capacity building, program support and advocacy and analytics on solar energy.
- **Technology sharing and finance** could also become important aspects of ISA in the future, allowing for meaningful cooperation between countries in the solar energy sector.

3) Mandarin Duck

About

- Considered the world's most colorful waterfowl, the **Mandarin duck (*Aix galericulata*)** is a **migratory avian species native to east Asia**, primarily China but has established populations throughout Western Europe.
- The Mandarin duck breeds in eastern Siberia, China, and Japan and winters in southern China and Japan.
- The mandarin ducks breed in densely wooded areas near **shallow lakes, marshes or ponds**.
- **Protection status: IUCN Red List- Least Concern**



Why in news?

- A **campaign to give up airguns and other firearms** used for hunting has made Mandarin ducks return to Arunachal Pradesh after a year.
- The bird was sighted on the **man-made Siikhe Lake** in the Lower Subansiri district's **Ziro Valley**.

- This was the **second appearance** of the species in the Ziro Valley. The bird was sighted for the first time in the state on February 20 last year.
- Launched more than a year ago, the abhiyan has led to people in the State giving up more than 2,000 airguns and other firearms.

News in detail

- The Mandarin duck had visited **eastern Assam and Arunachal Pradesh in 2021 after a gap of 108 years**. The bird was sighted on Manipur's Loktak Lake in 2013 and in western Assam's Manas National Park in 2014.
- The ducks came last year in Ziro, Dirang [western Arunachal Pradesh] and Maguri-Motapung wetland in Assam.
- The arrival of the Mandarin duck for two consecutive years indicates that Siikhe Lake has perhaps become a regular winter migration site for the species.
- This is a welcome development for the State that enacted the '**Pakke [site of a tiger reserve] declaration**' aimed at **mitigating the effects of climate change and also preserving the endangered species of flora and fauna in Arunachal Pradesh**.
- Deemed as one of Arunachal Pradesh's most beautiful high-altitude valleys, Ziro is known for an array of rare moth and butterfly species such as the **Kaiser-i-Hind, Apatani glory, Bhutan glory, Brown gorgon and Paris peacock**.

4) 247 Olive Ridley hatchlings released into sea in Visakhapatnam

What's in news?

- As many as **247 hatchlings of Olive Ridley turtles** were released into the sea at **RK Beach in Visakhapatnam** by the guards of the Forest Department and volunteers.
- The forest officials observed that the Visakhapatnam coast had seen **higher nesting sites** of Olive Ridleys this year. The department is hopeful of releasing

the highest numbers of hatchlings in a season by May-end.

- This year, nesting sites of **green sea turtle and hawksbill turtle** were also spotted along the coast. Both these species are listed as '**endangered**' and '**critically endangered**' respectively in the IUCN Red List.

About Olive Ridley Turtles

- The olive ridley turtle is considered the **most abundant sea turtle in the world**.
- Olive ridleys are found **only in warmer waters**, including the southern Atlantic, Pacific and Indian Oceans.
- They are listed as **vulnerable** in the IUCN Red list.
- All the five species of sea turtles occurring in India, including the Olive Ridley turtles, are legally protected under **Schedule I** of the Wildlife Protection Act, 1972 and **Appendix I** of the CITES Convention which prohibits trade in turtle products.

Mass nesting

- The Olive Ridley Turtles come to the beaches of Odisha coast annually between November and December and stay on until April and May for mass nesting. Such mass nesting events are called **arribadas**.
- While states like Maharashtra, Goa, and the offshore Andaman islands witness sporadic nesting of olive ridley turtles, **Odisha** is the only state in India that sees mass nesting of olive ridley turtles.
- The Olive Ridley turtles turn up in millions for mass nesting along the Odisha coast every year. **Gahirmatha beach in Odisha** is acclaimed as the **world's largest-known nesting site** for the marine species.
- Apart from Gahirmatha, turtles turn up at the **mouths of Rushikulya and Devi river** (both in Odisha) for mass nesting.



Threats

- The Olive Ridley's face serious threats across their migratory route, habitat and nesting beaches, due to human activities such as turtle unfriendly fishing practices, development and exploitation of nesting beaches for ports, and tourist centers.
- Though international trade in these turtles and their products is banned, they are still extensively poached for their meat, shell and leather.
- As the nesting period stretches over six months, the Indian Coast Guard undertakes the Olive Ridley Turtle protection program under the code name '**Operation Olivia**' every year.

5) India unveils Arctic Policy

What's the news?

- The government unveiled **India's Arctic Policy** titled '**India and the Arctic: building a partnership for sustainable development** with an aim to combat climate change and protect the environment.
- India holds one of the 13 positions as the **Observer** in the **Arctic Council**.

10 Key points

- India's engagement with the Arctic began when it signed the **Svalbard Treaty** in February 1920 in Paris between Norway, the US, Denmark, France, Italy, Japan, the Netherlands, Great Britain, and Ireland, and the British overseas Dominions and Sweden concerning Spitsbergen. Ever since then, India has been closely monitoring all the developments in the Arctic region.
- India initiated its Arctic research program in 2007 with a **focus on climate change** in the region. The objectives included **studying teleconnections between Arctic climate and Indian monsoon**, to characterize

sea ice in the Arctic using satellite data, to estimate the effect on global warming.

c. India also focuses on conducting research on the dynamics and mass budget of **Arctic glaciers and sea-level changes**, carrying out an assessment of the flora and fauna of the Arctic.

d. The relevance of the Arctic for India can be explained under **scientific research, climate change, environment, economic and human resources, geopolitical and strategic resources**.

e. The Arctic currently has **13 observers and is open to non-governmental organizations, non-littoral states, intergovernmental organizations, and inter-parliamentary organizations**.

f. India's Arctic policy aims to **enhance the country's cooperation with the Arctic**. It also seeks to combat climate change, as the rapidly-transforming region is warning three times faster.

g. The Indian Arctic policy is built on **six central pillars**: science and research, environmental protection, economic and human development, transportation and connectivity, governance and international cooperation, and national capacity building.

h. The Arctic region is significant due to the **shipping routes** that run through it.

i. According to an analysis published by Institute for Defense Studies and Analyses, the adverse effects of the Arctic are not just impacting the **availability of mineral and hydrocarbon resources, but also transforming global shipping routes**.

j. According to the Ministry of External Affairs, India can play a constructive role in **securing a stable Arctic**.

6) Mumbai Climate Action Plan

What is MCAP?

- Recently, the Maharashtra Chief Minister Uddhav Thackeray launched the Mumbai Climate Action Plan (MCAP).
- The plan is essentially designed to **reduce emissions and meet the climate goals outlined in the Paris Agreement to limit global warming to 1.5°C**.
- The plan has been drafted by the **Municipal Corporation of Greater**

Mumbai (MCGM) with support from World Resources Institute (WRI) India.

- Other organizations that partnered with the Government of Maharashtra in the initiative are the **C40 Cities Network, Climate Voices Maharashtra, and Waatavaran**. Mumbai had joined the C40 Cities Network in **2020**.

What are the key action areas of MCAP?

1. **Sustainable waste management**: The MCAP aims to **decentralize municipal waste** management by implementing actions such as segregation at source, organic waste composting, and so on.
 - It lays emphasis on the 4R approach: **reduce, reuse, recover, recycle, and also calls for treatment of wastewater**.
2. **Urban greening and biodiversity**: Mumbai has some of the lowest per capita green space ratios in the country so the **restoration and enhancement of biodiversity** are some of the **primary concerns** of the MCAP.
 - The policy calls for **increasing vegetation cover to minimize the rise in temperature**, reduce the effect of heatwaves and arrest urban flooding along with **green space access for all citizens**.
3. **Urban flooding and water resource management**: The MCAP focuses on reducing problems caused due to **waterlogging and floods** while also dealing with the lack of safe and affordable drinking water.
 - Mumbai is highly **susceptible to coastal risks** due to storms, and also faces extreme precipitation during monsoons, leading to frequent flooding in low-lying areas.
 - The climate action plan aims at building **flood-resilient infrastructure** in the city by **improving drainage networks and by improving early warning systems** and sensitizing vulnerable and coastal communities.
 - It also promotes framing policies that promote the reuse of water through measures like **increased percolation and rainwater harvesting**.

4. **Energy and buildings:** Strategies to make Mumbai emission-free include **minimizing the role of carbon in electricity grids** and promoting a transition to clean fuel resources.

- The MCAP aims to achieve this target by improving **energy efficiency** in both new and existing infrastructure and promoting green buildings.

5. **Air quality:** According to the action plan, the primary step in ensuring the improvement of air quality is **curbing pollution concentration levels. Mumbai is ranked among the most polluted cities of India.**

- The MCAP also outlines the need to decentralize the process of planning and increasing community awareness.

6. **Sustainable mobility:** According to the action plan, Mumbai will make transition to **using electric vehicles** as opposed to fuel-powered ones.

- The policy also encourages the **use of public transport systems** that will, in turn, lead to cleaner air, reduced travel time and less congestion on the roads.

Why does Mumbai need a Climate Plan?

- Since 1973, Mumbai has witnessed a **constant warming trend** with an average temperature **increase of 0.25°C per decade.**
- Between **1973 and 2020**, the city faced 10 heatwaves and two extreme heatwaves.
- Mumbai has also seen an increase in flooding in recent years. The floods of **2005, 2014, and 2017** caused significant damage to life and property in the city.
- The **population of Mumbai is also vulnerable to air pollution**, especially in high-risk areas where the concentration of air pollutants increases due to **poor ventilation, use of non-LPG cooking fuel, or occupational hazards.**

What is the C40 Cities Network?

- The C40 Cities **Climate Leadership Group** is an association of **97 cities from around the world aimed at fighting climate change and reducing greenhouse gas emissions**, thus mitigating climate risks.

- The group represents **one-twelfth** of the world population and a quarter of the global Gross Domestic Product (GDP).
- The goal of the C40's initiative is to reduce the emissions of its member cities to half within a decade.
- Membership to the group comes from **performance-based requirements.**
- Five Indian cities namely **Delhi, Kolkata, Chennai, Bengaluru, and Mumbai** are currently a part of the C40 network.

7) Coral Reefs

What are Coral reefs?

- Coral reefs are large underwater structures composed of the skeletons of colonial **marine invertebrates called coral.**
- The coral species that build reefs are known as **hermatypic, or "hard," corals** because they extract **calcium carbonate (CaCO₃)** from seawater to create a hard, durable exoskeleton that protects their soft, sac-like bodies.
- Other species of corals that are not involved in reef building are known as "soft" corals. These types of corals are flexible organisms often resembling plants and trees and include species such as sea fans and sea whips.

Symbiotic relationship

- Most reef-building corals contain photosynthetic algae, called **zooxanthellae**, that live in their tissues. The corals and algae have a **symbiotic relationship.**
- The coral provides the algae with a protected environment and compounds they need for photosynthesis. In return, the algae produce oxygen and help the coral to remove wastes. The presence of the zooxanthellae also provides colored pigments to help protect the coral's white skeleton from sunlight.

Significance of Coral reefs

- Coral reefs only occupy 0.1% of the area of the ocean but they support 25% of all marine species on the planet.

- Because of the diversity of life found in the habitats created by corals, reefs are often called the "**rainforests of the sea.**"

Geographical distribution

- The reef-building corals prefer to grow at
 - **depths shallower than 30 m (100 ft),** or
 - where the **temperature range is between 16-32°C,** and
 - **light levels are high**
- The majority of reef building corals are found within tropical and subtropical waters. These typically occur between **30°N and 30°S of the equator.**
- The largest of these coral reef systems, the **Great Barrier Reef** in Australia, is more than 1,500 miles long (2,400 kilometers).



Coral reefs in India

- Coral reefs are present in the areas of **Gulf of Kutch, Gulf of Mannar, Andaman & Nicobar, Lakshadweep Islands and Malvan coast of Maharashtra.**



Main threats to coral reefs

- **Climate change:** Warmer water temperatures can result in **coral bleaching.** When water is too warm, corals expel the algae (zooxanthellae) living in their tissues causing the coral

to turn completely white. This is called **coral bleaching.** When a coral bleaches, it is not dead. Corals can survive a bleaching event, but they are under more stress and are subject to mortality.

- **Ocean acidification:** Ocean acidification is caused by rising levels of CO₂ in the atmosphere. Oceans absorb some of the CO₂. As CO₂ enters the ocean, it reacts with water increasing hydrogen ion concentration (thus decreasing ocean pH) and decreasing the carbonate ion concentration. A reduction in carbonate ions affects the **Calcification process** of Corals.
- *Calcification is the process by which corals form their skeletons by combining calcium ions and carbonate ions to create calcium carbonate.*
- **Pollution:** Urban and industrial waste, plastics, sewage, agrochemicals, and oil pollution are poisoning reefs. Some pollutants, such as sewage and runoff from farming, increase the level of nitrogen in seawater, causing an overgrowth of algae.
- **Sedimentation:** Erosion caused by construction, mining, logging, and farming is leading to increased sediment in rivers. This ends up in the ocean, where it can smother corals by depriving them of the light needed to survive.
- **Destructive fishing practices:** These include cyanide fishing, blast or dynamite fishing, bottom trawling, and muro-ami (banging on the reef with sticks). **Bottom-trawling** is one of the greatest threats to cold-water coral reefs.

Why in news?

- The report by the **Great Barrier Reef Marine Authority**, which manages the world's largest coral reef ecosystem highlights that **Australia's Great Barrier Reef is suffering widespread and severe coral bleaching due to high ocean temperatures** two years after a mass bleaching event.
- The report comes three days before a **United Nations delegation** is due to assess whether the reef's World

Heritage listing should be downgraded due to the ravages of climate change.

News in detail

- The reef has suffered significantly from **coral bleaching caused by unusually warm ocean temperatures in 2016, 2017 and 2020**. The previous bleaching damaged **two-thirds** of the coral.
- The environmental group Greenpeace said the severe and widespread coral bleaching suffered during a **La Niña weather pattern that is associated with cooler Pacific Ocean temperatures** was evidence of the Australian government's failure to protect the coral from the impacts of climate change.
- Greenpeace mentions that **Climate change caused by burning coal, oil and gas is threatening the very existence of reefs**.

8) The Power is Tax -Free

What's in news?

- At the 26th United Nations Climate Change conference, commonly referred to as **COP26**, the Prime Minister of India charted out the country's immediate target to **reduce carbon emissions by one billion tonnes by 2030 and turn net zero by 2070**.
- A major part of the overall emission reductions is to be achieved by **raising the share of renewable energy to 50% of overall energy consumption**.
- While India's share of renewable energy has almost doubled from **11.8%** in March 2015 to **25.2%** in **July 2021**, a NITI Aayog report estimates that this sector will require an investment of **\$4.5 trillion in building green energy infrastructure** to meet the 50% target by 2030.
- India had launched the **Climate Finance Leadership initiative** in conjunction with the **United Kingdom** back in September 2021 to gather resources and provide a fillip to **green energy projects** in the country.

- The European Union (EU) renewable energy financing mechanism is a perfect example of how **private entities** can participate with equal opportunity to either develop green energy projects or support in the advancement of a green energy technology.
- With a target of achieving a **32.5%** share of renewable energy by 2030, the EU is using this mechanism to focus on **private participation in green energy projects** through statistical transfers or joint projects.
- The cost of development of solar power capacity reduces as the scale increases and will play a vital role in significantly **reducing the carbon footprint of the domestic energy sector** in the current decade.
- Moreover, being the **seventh largest country by land area**, India can utilize large expanses of desert or barren land to develop large-scale solar power generation projects that will then be connected to the expansive grid network available.
- **Eg:** It will be important to recreate the success of marquee projects like the **Bhadla Solar Park in Rajasthan**, the largest of its kind in the world with a 2245 MW capacity
- With an estimated **8.24 lakh jobs** being provided by the renewable energy sector in the country today, the **solar photovoltaic segment contributes to nearly 25%** of the total and can easily increase employment opportunities by a factor of ten if India meets its targets of creating **450GW of solar generation capacity by 2030**.
- Thus, **solar power** is most definitely the solution to climate change, generating employment and providing ample electricity to its burgeoning population.

9) Golden Langur

About Golden Langurs (Trachypithecus geei)

- They are primate species, living in **western Assam and foothills of Bhutan**.

- According to the IUCN classification it is in the 'endangered' category.
- They play a vital role in the dispersion of seeds and pollination which helps to maintain the forest ecosystem.
- They are found in **Manas National park** and in nearby forests.
- Communities in **Kakoijana reserve forest, near Chakrashila Wildlife Sanctuary, Assam**, have helped to conserve the species and maintain their population.
- Golden Langur are easily recognised by the color of their fur, and are distributed in the forested habitats of **Tsirang, Sarpang, Zhemgang and Trongsa districts of Bhutan**.
- In India, fragmented and isolated populations of the species are distributed in the **Chirang, Kokrajhar, Dhubri and Bongaigaon districts of Assam**.



Why in news?

- A recent study by scientists has suggested a **significant decline in the habitat of Golden Langur (*Trachypithecus geei*)**, an endangered primate species.

News in detail

- A recent paper titled "**Future simulated landscape predicts habitat loss for the Golden Langur**

(*Trachypithecus geei*): A range level analysis for an endangered primate" throws light on whether the habit of the endangered primate is protected or not.

- The results indicate that **out of the total range extent (66,320 km²), only 12,265 km² (18.49%) is suitable for the species** at present, which will further be reduced to **8884 km² by the year 2031**, indicating major range contraction.
- Only **14.39% of the future suitable areas fall inside the Protected Area (PA) network** of both countries in the entire global distribution range.
- Scientists say **most of the southern populations in Assam are currently distributed in reserve forests** that are under higher levels of **anthropogenic pressures**.
- In recent years, studies from these areas have reported **human-langur conflict cases**, and the intensity of these cases is increasing because of enhanced human footprints in the habitat of the species.
- The impacts of land-use change will be more fatal to the existence of Golden Langur than human-induced climate change. Therefore, the identified forest patches with suitable habitats should be prioritized by forest managers for the implementation of habitat improvement activities

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ECONOMY

1) Priority Sector lending norms

What is Priority Sector Lending?

- Priority Sector means those sectors which the Government of India and Reserve Bank of India consider as important for the development of the basic needs of the country and are to be given priority over other sectors. The banks are mandated to encourage the growth of such sectors with adequate and timely credit.
- Priority Sector includes the following categories:
 - Agriculture
 - Micro, Small and Medium Enterprises
 - Export Credit
 - Education
 - Housing
 - Social Infrastructure
 - Renewable Energy
 - Others
- **Targets Under the Priority Sector Lending**
 - **Domestic scheduled commercial banks** (excluding Regional Rural Banks and Small Finance Banks) and **Foreign banks with 20 branches and above:** 40 per cent of Adjusted Net Bank Credit or Credit Equivalent Amount of Off-Balance Sheet Exposure, whichever is higher.
 - **Regional Rural Banks & Small finance banks:** 75 per cent of Adjusted Net Bank Credit or Credit Equivalent Amount of Off-Balance Sheet Exposure, whichever is higher.
 - **Foreign banks with less than 20 branches:** 40 per cent of Adjusted Net Bank Credit or Credit Equivalent Amount of Off-Balance Sheet Exposure, whichever is higher, to be achieved in a phased manner by 2020.
 - **Sub-targets** are specified for certain sectors like 18% to

agriculture with 8% to small and marginal farmers, 7.5% to micro units etc.

Recent changes

- The RBI released revised priority sector lending guidelines to augment funding to segments including start-ups and agriculture.
- According to the revised guidelines,
 - **Bank finance of up to ₹50 crore to start-ups,**
 - **loans to farmers both for installation of solar power plants for solarisation of grid-connected agriculture pumps, and for setting up compressed biogas (CBG) plants** have been included as fresh categories eligible for finance under the priority sector.
- The revised PSL guidelines have been framed to **address regional disparities** in the flow of priority sector credit. Higher weightage has been assigned to incremental priority sector credit in '**identified districts**' where priority sector credit flow is comparatively low.
- The targets prescribed for '**small and marginal farmers**' and '**weaker sections**' are being increased in a phased manner and higher credit limit has been specified for **farmer producer organisations (FPOs)/farmers producers companies (FPCs)** undertaking farming with assured marketing of their produce at a pre-determined price.
- While the **loan limits for renewable energy have been doubled** now, the **credit limit for health infrastructure**, including those under 'Ayushman Bharat', has also been **doubled** to improve the country's health infrastructure.
- Commercial banks have been instructed to adhere to the revised guidelines.

Why in News?

- In 2020, the RBI included **all food & agro- processing activities** as eligible under Priority Sector Lending (PSL). The list of eligible activities under PSL has been published recently.

2) Pradhan Mantri Kaushal Vikas Yojana

About PMKVY

- Pradhan Mantri Kaushal Vikas Yojana (PMKVY) is the flagship scheme of the **Ministry of Skill Development & Entrepreneurship** implemented by **National Skill Development Corporation (NSDC)**. The scheme was launched in 2015.
- It is implemented under the **Skill India Mission**.
- The objective of this programme is to **enable a large number of Indian youth to take up industry-relevant skill training** that will help them in securing a better livelihood.
- Individuals with prior learning experience or skills will also be assessed and certified under **Recognition of Prior Learning**.
- Skill training is based on the **National Skill Qualification Framework (NSQF)** and industry led standards.

Objectives of PMKVY

- To impart industry-related skills to the unemployed youth and school/college dropout;
- To provide financial and placement assistance to trained candidates.

PMKVY has three key components

- **Short Term Training (STT):** Under this component, training is given to unemployed youths or school/college dropouts in line with the National Skills Qualification Framework.
- **Recognition of Prior Learning:** Under this module, assessment and certification is given to applicants with existing skills or a prior learning experience.
- **Special Projects:** This module has been designed to create a platform that facilitates training for special job roles in government, corporate or industrial bodies.

About NSQF

- The National Skills Qualifications Framework is a **competency-based framework** that **organizes all qualifications according to a series of levels of knowledge, skills and aptitude**.
- These levels, graded from one to ten, are defined in terms of learning outcomes which the learner must possess regardless of whether they are obtained through formal, non-formal or informal learning. NSQF in India was notified in **2013**.
- Under NSQF, the learner can acquire the **certification for competency** needed at any level through **formal, non-formal or informal learning**. In that sense, the NSQF is a **quality assurance framework**.

About NSDC

- National Skill Development Corporation is a **not-for-profit public limited company** incorporated in 2008.
- NSDC was set up by the **Ministry of Finance** as a **Public Private Partnership (PPP) model**. The **Government of India** through the Ministry of Skill Development & Entrepreneurship **holds 49% of the share capital** of NSDC, while the **private sector has the balance 51%** of the share capital.
- NSDC acts as a catalyst in skill development by providing funding to enterprises, companies and organizations that provide skill training.
- Its mandate is also to enable a support system which focuses on quality assurance, information systems and train the trainer academies either directly or through partnerships.

Why in News?

- Since inception of PMKVY i.e. 2015, 4.22 lakh candidates have been trained under Short Term Training (STT) and 7.17 lakh candidates have been oriented under Recognition of Prior Learning (RPL) in the North Eastern States.

3) psbloansin59minutes.com portal

About the Portal

- psbloansin59minutes.com is a new-age digital lending platform. Using the portal, MSMEs can get loan amount approval from **Rs. 1 Lakh to Rs. 5 Crore in less than 59 minutes** from Public and Private Sector Banks (PSBs), Non-Banking Financial Companies (NBFCs), etc.
- PSB59 platform was born from the insight that MSMEs found it hard to avail loans from formal banking channels due to the tedious application, documentation and verification processes.
- With PSB Loans in 59 minutes, the entire process of a Small Business Loan for MSMEs is expected to become super quick and hassle-free that too with minimal documentation.
- The portal processes the loans **without human intervention till the stage of sanction or disbursement.**

The analysis process is done from the various sources of the loan applicant's financial profile.

- It should be noted that the portal only offers a platform for **speedier in-principle approval** by lenders onboarded on it. The final credit decision taken on loan applications sourced through the portal is taken by the lenders and monitoring of the accounts of sanctioned loans is also done by the lenders.

Why in News?

- Union Minister of State for Finance Dr Bhagwat Kisanrao Karad said that since the inception of the **psbloansin59minutes.com portal** in 2018, more than 2 Lakh proposals have been disbursed in the business loan category and around 18,000 proposals have been disbursed in the retail loan category.

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INTERNATIONAL RELATIONS

1) What are the Geneva Conventions guidelines during wartime?

Context

- Russia's armed invasion of Ukraine has set off a steady escalation in hostilities on Ukrainian soil. As the evidence of casualties in the civilian population continues to mount, the world will increasingly look to the Geneva Conventions, a set of principles outlining norms for combatant behaviour during a war, for standards to which the invading Russian forces can be held.

What are the Geneva Conventions guidelines during wartime?

- The Geneva Conventions are a **set of four treaties, formalised in 1949**, and **three additional protocols**, the first two of which were formalised in **1977** and the third in **2005**, which **codify widely accepted ethical and legal international standards for humanitarian treatment of those impacted by any ongoing war**.
- The focus of the Conventions is the **treatment of non-combatants and prisoners of war, and not the use of conventional or biological and chemical weapons**, the use of which is governed respectively by the **Hague Conventions and the Geneva Protocol**.
 - The **First Geneva Convention** protects wounded and sick soldiers on land during war. This convention extends to medical and religious personnel, medical units, and medical transport.
 - The **Second Geneva Convention** protects wounded, sick and shipwrecked military personnel at sea during war.
 - The **Third Geneva Convention** applies to prisoners of war, including a

wide range of general protections such as humane treatment, maintenance and equality across prisoners, conditions of captivity, questioning and evacuation of prisoners, transit camps, food, clothing, medicines, hygiene and right to religious, intellectual, and physical activities of prisoners.

- The **Fourth Geneva Convention**, which most imminently applies to the invasion of Ukraine by Russian military forces, protects civilians, including those in occupied territory. The other Geneva Conventions were concerned mainly with combatants rather than civilians. This convention also spells out the **obligations of the occupying power vis-à-vis the civilian population** and outlines detailed provisions on humanitarian relief for populations in occupied territory.

Which countries are signatories?

- The Geneva Conventions have been ratified by **196 states, including all UN member states**. The three Protocols have been ratified by 174, 169 and 79 states respectively.

To what extent have the Geneva Conventions been upheld worldwide in recent years?

- On the 70th anniversary of the Conventions' adoption, **Amnesty International**, a human rights advocacy group, noted in 2019 that there has been a blatant disregard for civilian protection and international humanitarian law in armed conflicts where four of the five permanent members of the UN Security Council are parties — Russia, the U.S., the U.K. and France.

- Specifically, Amnesty cited the U.S.-led coalition's bombing of Raqqa in Syria, which left more than 1,600 civilians dead; destruction of civilian infrastructure and lives in Aleppo and Idlib by Russian forces, leading to mass displacement of millions; and the war in Yemen where the Saudi Arabia and the UAE-led coalition, backed by the West, killed and injured thousands of civilians, fuelling a full-blown humanitarian crisis.
- These cases underscore the grim fact that the Geneva Conventions, even when backed by rulings of the ICC, **cannot be enforced by third parties to any conflict**. However, they have in the past proved effective at **raising global awareness of human rights violations** across conflict zones, and in some cases **led to sanctions or trade embargoes against the belligerents**.

2) ICJ's provisional measures on military operations

Context

- Ukraine has approached the International Court of Justice (ICJ), the **principal judicial organ of the United Nations (UN)**, to hold that no acts of genocide defined under the Genocide Convention 1948, as claimed by Russia have been committed by Ukraine. Additionally, Ukraine also requested the court to indicate certain provisional measures against Russia.

Where does the ICJ's jurisdiction lie?

- **Article 36(1)** of the Statute of the ICJ provides that the **ICJ shall have jurisdiction in all matters relating to the UN Charter, or other treaties or conventions in force**.
- The **Genocide Convention 1948** under Article IX provides that disputes between states relating to the interpretation, application or fulfilment of the Genocide Convention, as well as those relating to the responsibility of a state for genocide shall be submitted to the ICJ at the request of any of the parties to the dispute.

- **Russia and Ukraine are both parties to the Genocide Convention.**

What do the ICJ's powers to indicate provisional measures entail?

- The Statute of the International Court of Justice empowers the ICJ to **indicate provisional measures in any case before it in order to preserve the rights of the parties involved**.
- Until 2001, there was uncertainty as to whether the provisional measures indicated by the ICJ were binding. However, in the **LaGrand (2001) case** between Germany and the U.S. relating to the denial of consular access to a German national in the U.S., the ICJ made it clear that **provisional measures are binding in character and create international legal obligations**.
- Further, provisional measures may be indicated by the ICJ either on the **request of a state party or proprio motu** i.e., on its own motion.
- The ICJ has also held in the **Tehran Hostages Case (1980)** that the **non-appearance of one of the parties concerned cannot itself be an obstacle to indication of provisional measures**. In the present case, the Russian Federation chose not to appear in the oral proceedings before the court. Notwithstanding, the ICJ proceeded to decide the case.

What lies ahead?

- The provisional measures indicated by the ICJ are binding, and non-compliance certainly entails the breach of an international legal obligation. However, **the ICJ does not have the means or mechanism to secure the enforcement of the judgment itself**.
- Indeed, the UN Charter under Article 94(2) provides that if any state fails to perform obligations pursuant to an ICJ decision, the **UN Security Council (UNSC) may take measures necessary to give effect to the judgment**. However, the possibility in the present case is bleak given that **Russia has veto power in the UNSC**.
- Additionally, if there is an impasse in the Security Council, the **UN General Assembly (UNGA)** is empowered

under **Article 14** of the UN Charter to recommend measures for the peaceful adjustment of any situation which it deems likely to impair the general

welfare or friendly relations among nations.

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SCIENCE AND TECHNOLOGY

1) SARAS Telescope

What is it?

- **SARAS** is a niche high-risk high-gain experimental effort of Raman Research Institute to **detect extremely faint radio wave signals** from the depths of time, from our “**Cosmic Dawn**” when the first stars and galaxies formed in the early Universe.
- **Reverberations** of the Big Bang that birthed our universe 13.8 billion years **continue** to linger in a **swathe of radiation called the cosmic microwave background (CMB)**.
 - The cosmic microwave background (CMB) is **leftover radiation from the Big Bang** or the time when the universe began.
- Detecting a faint signal from such an early period of the Universe is extremely difficult. The celestial signal is exceptionally faint – buried in sky radio waves that come to us from the gas in our own Galaxy, the Milky Way, which are a million times brighter.
- The SARAS 3 radio telescope invented and built by **the astronomers** at Raman Research Institute(RRI) is the first telescope worldwide to reach the required sensitivity.
 - The Raman Research Institute was **founded** in **1948** by the Indian physicist and Nobel Laureate, **Sir C V Raman**. RRI is an **autonomous research institute** engaged in research in basic sciences receiving funds from the Department of Science and Technology of the Government of India.

What are Radio waves?

- In the electromagnetic spectrum, **radio waves have the longest wavelengths.**
- They **range in size from a football to the size of our whole planet.**
- In the late 1880s, **Heinrich Hertz demonstrated the existence of radio waves.**

- We may listen to music by tuning a radio to a certain wavelength (or frequency). The radio "receives" these electromagnetic radio waves and transforms them to mechanical vibrations in the speaker, resulting in the sound waves you hear.

What are Radio Telescopes?

- Radio telescopes are **used to examine radio radiation** from stars, galaxies, black holes, and other celestial phenomena that occur naturally.
- They can **also be used to broadcast and reflect radio light** from our solar system's planetary bodies.
- The longest wavelengths of light, spanning from 1 millimetre to over 10 metres, are seen by these specially built telescopes.

Why in News?

- Using data from the EDGES radio telescope, a team of researchers from Arizona State University (ASU) and MIT in the United States discovered a signal from stars forming in the early cosmos in 2018.
- But SARAS 3 (updated version of SARAS) found no evidence of it.

2) Solar Spicules

What are solar spicules?

- **These are jets of plasma, shooting out from the Sun's outermost layer – the Chromosphere – and making incursions into its atmosphere.**
- Solar spicules **rise like forests from the Sun's Chromosphere and pierce the Sun's atmosphere or Corona.**
- A typical spicule may be 4,000-12,000 kilometres long and 300-1,100 kilometres wide. These are **structures that are believed to transport momentum to the solar wind and to provide heat to the solar Corona**, which, intriguingly, can be a million degrees Celsius hotter than the Chromosphere.

Why in News?

- A team of interdisciplinary researchers from India and the U.K. led by

astronomers from the Indian Institute of Astrophysics, Bengaluru, have explained the origin of 'spicules' on the Sun, using laboratory experiments as an analogy.

3) GenOMICC

What's in News:

- Scientists as part of a research project, **GenOMICC (Genetics of Mortality in Critical Care)**, have identified 16 new **genetic variants** that make a person more **susceptible to a severe COVID-19 infection**.
 - A **single gene variant**, the team found, **disrupted** a key **messenger molecule in immune system** signalling, called **interferon alpha-10** — that **increased a patient's risk** of severe disease.
 - There were variations in **genes that control the levels** of a central component of **blood clotting — known as Factor 8** — that were linked with critical illness in COVID-19.

About GenOMICC

- The **GenOMICC** is a **research study that brings together clinicians and scientists from around the world to find the genetic factors** that lead to **determining the outcome in critical illnesses**.
- While millions suffer from infectious diseases every year, even though most cases are mild, some people become extremely unwell and need critical care. This may be because of their genes and the GenOMICC project is about identifying them.

4) Deep Ocean Mission

Why in News:

- India will soon scour the ocean bed to unravel the mysteries of the origins of life as scientists are set to travel up to 6,000 metres below the sea surface under a deep ocean mission (DOM).

About Deep Ocean Mission

- It is an **initiative** spearheaded by the **Ministry of Earth Sciences (MoES)** in

collaboration with **ISRO, DRDO, Department of Atomic Energy (DAE), Council of Scientific and Industrial Research (CSIR), Department of Biotechnology (DBT) and the Indian Navy.**

- The Indian **government** wants to **understand the oceans better**, both as a **resource and for the conservation of marine biodiversity**.
- One of the main aspects of the mission will be design, development and demonstration of human submersibles..
- Under the mission, studies are planned at depths close to 6,000 metres under six major components —
 1. Mineral exploration on the sea-bed;
 2. Study and mapping of biodiversity;
 3. Study of climate change;
 4. Exploration of marine biology and developing allied courses,
 5. Training; development and demonstration of ocean exploration
 6. Off-shore technologies for future.
- The DOM will also **help India map the ocean bed**, which is a rich source for metals and minerals.
- The mission is also directed towards **capacity development in marine biology** which will **provide job opportunities** in Indian industries
- The mission will help scientists **identify and demarcate resource-rich areas** which could be exploited later when suitable technology is available for deep sea mining.
- The exploration studies of minerals will pave the way for **commercial exploitation** in the near future as and when such a code is evolved by the International Seabed Authority.
- The DOM could also **lead to the development of various technologies** such as **acoustic phones, components that withstand a high-pressure environment, research vessels and related infrastructure.**

Background of deep ocean mission

- India has been allotted a site of **75,000 square kilometres in the Central Indian Ocean Basin (CIOB) by the UN International SeaBed Authority** for exploitation of polymetallic nodules (PMN).
- These are rocks scattered on the seabed containing iron, manganese, nickel and cobalt.
- Being able to lay hands on a fraction of that reserve can meet the energy requirement of India for the next 100 years.
- It has been estimated that **380 million metric tonnes of polymetallic nodules** are available at the **bottom of the seas in the Central Indian Ocean.**
 - India's Exclusive Economic Zone spreads over 2.2 million square kilometres
- **The Ministry of Earth Sciences (MoES)** will be the **nodal Ministry** implementing this multi-institutional mission

Significance of the mission

- The mission **forms a part of the Blue Economy** envisioned to be developed by 2030, which will place India among select countries — US, France, Japan, Russia and China — to have special missions dedicated for ocean studies.
- It is a **strategic and geo-political move** in order to further **strengthen India's position in the Indian Ocean region.**
- Globally, **only 11 percent of marine species** have been identified. The deep ocean species are even less explored. Hence the **Deep Ocean Mission** will be **helpful in identifying the species and knowing more about climate change.**

Economic Potential

- It will **enable India** to develop capabilities to **utilise resources in the Central Indian Ocean Basin (CIOB).**
 - CIOB reserves **contain deposits of metals like iron, manganese, nickel and cobalt.** It is envisaged that **10% of recovery** of that large

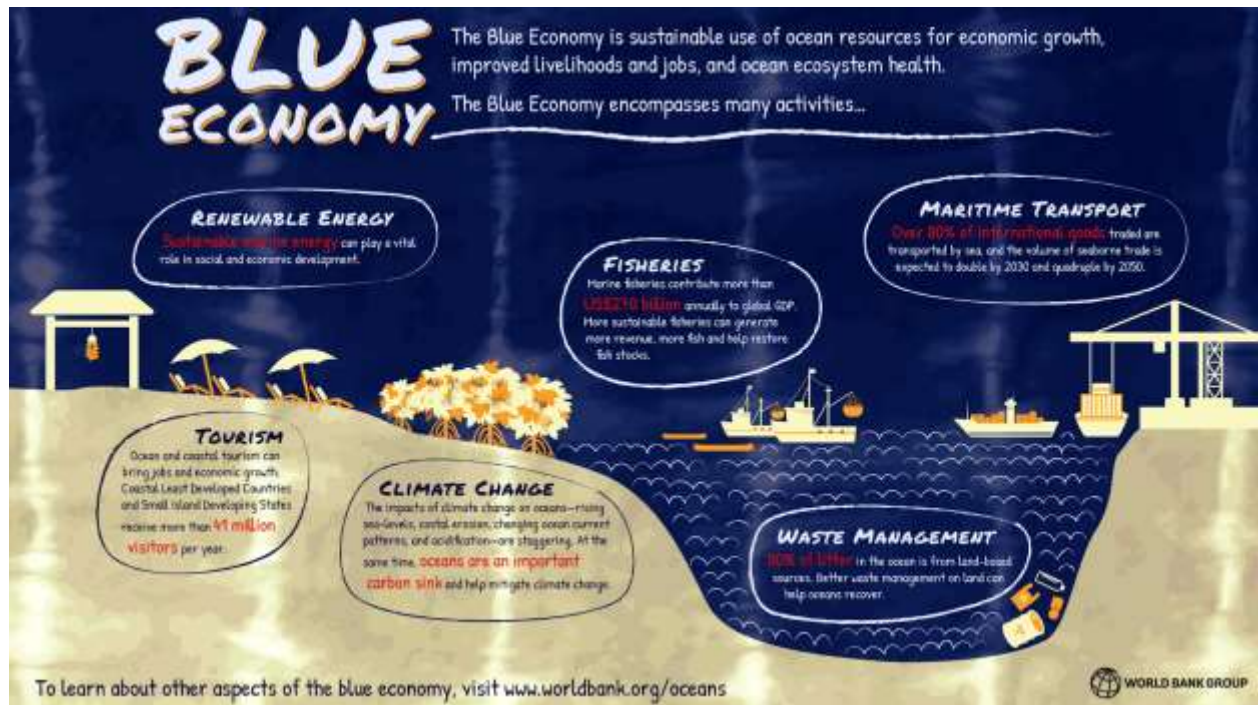
reserve can **meet the energy requirement of India for the next 100 years.**

- India has also been **allotted 75,000 square kilometres in the CIOB by the UN International Sea Bed Authority (ISA)** for exploration of poly-metallic nodules.
 - The **ISA is an institution set up under the Convention on Law of the Sea** to which **India is a Party.**
- Polymetallic nodules have economically valuable metals such as Copper, Cobalt, Nickel and Manganese in them and are viewed as potential resources to take care of the depleting land resources and increasing demand of these metals.

What is PMN?

- **Polymetallic nodules are rounded accretions of manganese and iron hydroxides** that cover vast areas of the **seafloor**, but are most abundant on abyssal plains at water depths of 4000-6500 metres.
- They form through the aggregation of layers of iron and manganese hydroxides around a central particle (such as a shell or small rock fragment), and range in size from a few millimeters to tens of centimeters.
- **Growth of these nodules is extremely slow**, at a rate of millimetres per million years, and they remain on the seafloor surface, often partially buried in a thin layer of sediment.
- The composition of nodules varies with their environment of formation, but **in addition to manganese and iron, they can contain nickel, copper and cobalt** in commercially attractive concentrations as well as **traces of other valuable metals such as molybdenum, zirconium and REEs.**
 - *To know more about REE's(Rare Earth Elements)-* <https://officerspulse.com/rare-earth-metals/>

Other Blue Economy Initiatives related by India:



- **India-Norway Task Force on Blue Economy for Sustainable Development:** in order to promote Sustainable Development, of both the countries. The ultimate goal is to promote sustainable value creation and employment in the ocean-based industries.
- **Sagarmala Project:** The Sagarmala Programme is an initiative to enhance the performance of the country's logistics sector. The programme envisages unlocking the potential of waterways and the coastline to minimize infrastructural investments required to meet these targets by using IT enabled services for modernization of ports.
- **O-SMART:** Main objectives of O-SMART (Ocean Services, Modelling, Applications, Resources and Technology) scheme of Ministry of Earth Sciences (MoES), Govt. of India are:
 - To generate and regularly update information on Marine Living Resources and their relationship with the physical environment in the Indian Exclusive Economic Zone (EEZ),
 - To periodically monitor levels of sea water pollutants for health assessment of coastal waters of India, to develop shoreline change maps for assessment of coastal erosion due to natural and anthropogenic activities,
 - To develop a wide range of state-of-the-art ocean observation systems for acquisition of real-time data from the seas around India,
 - To generate and disseminate a suite of user-oriented ocean information, advisories, warnings, data and data products for the benefit of society,
 - To develop high resolution models for ocean forecast and reanalysis system,
 - To develop algorithms for validation of satellite data for coastal research and to monitor changes in the coastal research,
 - Acquisition of Coastal Research Vessels (CRVs) for coastal pollution monitoring, testing of various underwater components and technology demonstration,
 - To develop technologies to tap the marine bio resources,

- To develop technologies generating freshwater and energy from ocean,
- **Integrated Coastal Zone Management:** Integrated coastal zone management (ICZM) or Integrated coastal management (ICM) is a coastal management process for the management of the coast using an integrated approach, regarding all aspects of the coastal zone, including

geographical and political boundaries, in an attempt to achieve sustainability.

- **National Fisheries Policy:** The National Fisheries Policy would offer a strategic way forward to develop, harness, manage and regulate capture and culture fisheries in a responsible and sustainable manner.

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DEFENCE

1) Man-Portable Air-Defence Systems (MANPADS)

Why in News:

- The United States approved a \$200-million arms package for Ukraine, which would include US-made Stinger Missiles, which are a type of shoulder-fired Man-Portable Air-Defence Systems (MANPADS).

What are MANPADS?

- **Man-Portable Air-Defence Systems are short-range, lightweight and portable surface-to-air missiles** that can be fired by individuals or small groups to destroy aircraft or helicopters. They help shield troops from aerial attacks and are most effective in targeting low-flying aircrafts. MANPADs or Man-Portable Anti-Tank Systems work in a similar manner but are used to destroy or incapacitate military tanks.
- MANPADS can be shoulder-fired, launched from atop a ground-vehicle, fired from a tripod or stand, and from a helicopter or boat.
- Most MANPADS have **passive or 'fire and forget' guidance systems**, meaning the operator is not required to guide the missile to its target, enabling them to run and relocate immediately after firing.
- The missiles are **fitted with Infrared (IR) seekers** that identify and target the airborne vehicle through heat radiation being emitted by the latter.

Concerns around MANPADS

- According to the **Global Organised Crime Index**, Ukraine is believed to have one of the largest arms trafficking markets in Europe. While it has long been a key link in the global arms trade, its role has only intensified since the beginning of the conflict in eastern Ukraine.
- After the annexation of Crimea by Russia in 2014, weapons supplied by other countries to aid Ukraine ended

up in the wrong hands in multiple cases. Reports indicate that weapons in the state arsenal were illicitly acquired and smuggled by criminal and non-state rebel groups.

- Thus, observers fear that sending lightweight ground-based MANPADS to Ukraine may contribute to intensifying the network of illegal weapon trade.
- In other conflict-hit states as well, there is widespread evidence of MANPADS ending up with non-state and terrorist groups; the most prominent cases being Syria, Libya and Afghanistan.
- Another concern around MANPADS is the attacks on civilians

Related Information

Organized Crime Index

- The **Global Organized Crime Index** is the first tool of its kind designed to assess levels of organized crime and resilience to organized criminal activity. It **includes in its rankings all the UN member states**.
- It evaluates UN member states according to two metrics: according to their criminality on a score from 1 to 10 (lowest to highest organized crime levels), which in turn is based on their criminal markets score and criminal actors score; and according to their resilience to organized crime, from 1 to 10 (lowest to highest resilience levels).
- It is **updated every two years**
- It is **released by Global Initiative Against Transnational Organized Crime** (The Global Initiative is an **independent civil-society organization**, headquartered in Geneva, Switzerland)

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ART AND CULTURE

1) Ancient Nalanda University

Why in News:

- A process is under way to translate and publish hundreds of original Buddhist manuscripts from Nalanda and Vikramshila, saved during the burning of the ancient universities in the 12th and 13th centuries.

About the university

- The **Nalanda Mahavihara site is in the State of Bihar**, in north-eastern India.
- It **includes stupas, shrines, viharas (residential and educational buildings)** and important art works in stucco, stone and metal.
- It engaged in the **organized transmission of knowledge** over an uninterrupted period of 800 years.
- **During the reign of Gupta monarch Sakraditya (Kumaragupta I)**, the historic Nalanda University was **founded in 427 AD**. **Mahayana monks Asanga and Vasubandhu** are **said to have found Nalanda** in 5th century AD.
- The university was **largely focused on Buddhist studies**, but it **also offered courses in fine arts, medicine, mathematics, astronomy, politics, grammar, logic, epistemology, science and the art of combat**.
- Despite the fact that it covered all Buddhist sects, **Mahayana Buddhism was the dominant focus**.
- It drew experts and students from all over the world, with some coming all the way from Tibet, China, Korea, and Central Asia.
- **Nagarjuna (Madhyamika Shunyavad) and Aryabhatta**, the astronomer, are two of Nalanda's most famous scholars.
- The **medium of instruction** was given in **Sanskrit**.
- The university reached its zenith during the reign of Harshavardhana and the Pala emperors.
- **Hiuen Tsang (Xuanzang), a Chinese traveller, visited Nalanda University**

during King Harsha's reign and gave a thorough account of the university.

- **Itsing, a Chinese scholar**, stated that Nalanda housed 2,000 students and was supported by funds from 200 villages.
- The institution was a focus of academic activity until **1197 AD**, when **Turkish ruler Qutbuddin Aibak's general Bakhtiyar Khilji destroyed it**.
- The ancient university has been designated as a UNESCO World Heritage Site.
 - To read about world heritage sites : <https://officerspulse.com/unesco-world-heritage-sites/>

2) Warren Hastings

Why in News:

- Warren Hastings house near Kolkata is being restored by Archaeological Survey of India.

About him

- In 1772, he became the **first Governor of the Presidency of Fort William (Bengal)**, and in **1774, he became the first Governor-General of Bengal**, serving until 1785 (**first Governor of Bengal is Robert Clive**).
- During his presidency, the **Regulating Act of 1773 was adopted**. The office of Governor of Bengal was redesignated as "Governor-General of Bengal" after the Regulating Act of 1773. The Governors of Bombay and Madras were subordinate to the Governor-General of Bengal under this Act.
- **Robert Clive had founded the Dual System**, which **Hastings repealed**. Under the Dual system, the company possessed Diwani rights (rights to collect revenue) under the Dual System, while the Nizam or Indian chiefs had administrative power.
- The **First Anglo-Maratha war and the Second Anglo-Mysore war** were fought during his tenure.

- In 1785, he **aided Sir William Jones** in **forming the Asiatic Society of Bengal**.
- The **Nawab's yearly allowance was lowered** from Rs.32 lakh to Rs.16 lakh.
- The **Mughal Emperor's yearly tribute** was also **discontinued**.
- In Bengal, he was particularly harsh on the dacoits.
- In **1772, Calcutta** was designated as **Bengal's capital**.

Judicial reforms made by him

- **Courts for civil and criminal matters were created.** At Calcutta, two appellate courts were created, one for **civil matters (Sadar Diwani Adalat)** and the other for **criminal cases (Sadar Nizamat Adalat)**.
- **Muslims** were to be **tried according to the Quran's law**, while **Hindus** were to be **tried** according to **Hindu law**.
- The **Zamindars' judicial powers** were **removed**.
- The collector also had judicial powers. The district was the central administrative unit of the plan.

Trade Reforms

- Hastings **outlawed the dastak system**, which had previously been abused by company executives and traders.
- **Company officials' private trade was restricted**
- He imposed a **2.5 percent levy** on all Indian and foreign products.

Measures taken in revenue generation

- A **Board of Revenue** to collect revenue was established at Calcutta and the treasury was relocated to Calcutta.
- For each district, **British collectors were appointed, as well as an Accountant General**.
- **Unreasonable penalties were abolished**, and **restrictions on rent increases** were imposed.

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PIB ANALYSIS

1) PM-DevINE

About the Scheme

- A new scheme, **Prime Minister's Development Initiative for North East (PM-DevINE)** has been announced in Union Budget 2022-23, which will **fund infrastructure in the spirit of PM Gati Shakti, and social development projects** based on felt needs of the North-East.
- PM-DevINE will enable livelihood activities for youth and women by filling the gaps in various sectors, but it **will not be a substitute for existing Central or State schemes.**
- An initial allocation of Rs.1,500 crore has been made, as per Budget speech for 2022-23.

Why in News?

- An initial list of projects under PMDevINE has been released by the government.

2) India Cooling Action Plan

About ICAP

- The India Cooling Action Plan (ICAP) was launched in 2019 by the **Ministry of Environment, Forests and Climate Change.** The ICAP provides a 20-year perspective and outlines actions needed to provide access to sustainable cooling.
- The plan describes cooling as a “developmental need” and seeks to address the rising demand in cooling, from buildings to transport to cold-chains, through sustainable actions.
- The overarching goal of ICAP is to provide sustainable cooling and thermal comfort for all while securing environmental and socio-economic benefits for the society. This will also help in reducing both direct and indirect emissions.
- The plan estimates that the national cooling demand would grow eight times in the next 20 years, which would result in a corresponding five to eight-fold rise in the demand for

refrigerants that involve the use of HFCs.

- The Plan seeks to
 - (i) **reduce cooling demand across sectors by 20% to 25% by 2037-38,**
 - (ii) reduce refrigerant demand by 25% to 30% by 2037-38,
 - (iii) Reduce cooling energy requirements by 25% to 40% by 2037-38,
 - (iv) recognise “cooling and related areas” as a thrust area of research under national Science and Technology Programme,
 - (v) training and certification of 100,000 servicing sector technicians by 2022-23, synergizing with Skill India Mission.
- As part of the ICAP, the government has also announced **targeted R&D efforts** aimed at developing low-cost alternatives to HFCs.

Benefits:

- The following benefits would accrue to the society over and above the environmental benefits: (i) Thermal comfort for all – provision for cooling for EWS and LIG housing, (ii) Sustainable cooling – low GHG emissions related to cooling, (iii) Doubling Farmers Income – better cold chain infrastructure – better value of produce to farmers, less wastage of produce, (iv) Skilled workforce for better livelihoods and environmental protection, (v) Make in India – domestic manufacturing of air-conditioning and related cooling equipments, (vi) Robust R&D on alternative cooling technologies – to provide push to innovation in cooling sector.
- Cooling is also **linked to human health and productivity.** Linkages of cooling with **Sustainable Development Goals (SDGs)** are well acknowledged.

- The cross-sectoral nature of cooling and its use in development of the economy makes provision for cooling an important developmental necessity.
- The development of ICAP has been a multi-stakeholder inclusive process encompassing different Government Ministries/Departments/Organizations, Industry and Industry Associations, Think tanks, Academic and R&D institutions.

Why in News?

- This information was given by Ashwini Kumar Choubey, Minister of State, Ministry of Environment, Forest & Climate Change in Lok Sabha.

3) Sagarmala Programme

About the Programme

- The Sagarmala project seeks to **develop a string of ports around India's coast**. The objective of this initiative is to promote "Port-led development" along India's 7500 km long coastline.
- It aims to develop access to new development regions and enhance connectivity with main economic centres and beyond through expansion of rail, inland water, coastal and road services.
- The **Union Ministry of Shipping** has been appointed as the nodal ministry for this initiative.
- To assist in implementation of the Sagarmala Programme, the **Sagarmala Development Company Limited** was incorporated in 2016 under the Companies Act, 2013 by the Ministry of Shipping with authorized capital of INR 1000 crore and subscribed capital of INR 90 crore.

Significance

- India is located along key international trade routes in the Indian Ocean and has a long coastline of over 7,000 km. **Approximately 95% of India's merchandise trade (by volume) passes through sea ports.**
- Yet, **capacity constraints and lack of modern facilities** at Indian ports tremendously elongates the time taken

to ship goods in and out of the country and has **held back India's share in world trade**. For example, Turnaround time (TAT) at major ports was approximately 2.5 days in 2018-19, whereas the global average benchmark is 1-2 days.

- In addition to this, **last mile connectivity to the ports** is one of the major constraints in smooth movement of cargo to/from the hinterland. Around 87% of Indian freight uses either road or rail for transportation of goods. A significant share of this cargo experiences "idle time" during its transit to the ports due to capacity constraints on highways and railway lines connecting ports to production and consumption centers. Although water-borne transport is much safer, cheaper and cleaner, compared to other modes of transportation, it accounts for less than 6% of India's modal split.
- By comparison, coastal and inland water transportation contribute to 47% of China's freight modal mix, while in Japan and US, this share is 34% and 12.4% respectively. Significant savings can be achieved by shifting movement of industrial commodities like coal, iron ore, cement and steel to coastal and inland waterways.

Vision of the Sagarmala Programme

- The vision of the programme is to reduce logistics cost for EXIM and domestic trade with minimal infrastructure investment. This includes:
 - Reducing cost of transporting domestic cargo through optimizing modal mix
 - Lowering logistics cost of bulk commodities by locating future industrial capacities near the coast
 - Improving export competitiveness by developing port proximate discrete manufacturing clusters
 - Optimizing time/cost of EXIM container movement

Components

- Components of Sagarmala Programme are:
 - **Port Modernization & New Port Development:** De-bottlenecking and capacity expansion of existing ports and development of new greenfield ports;
 - **Port Connectivity Enhancement:** Enhancing the connectivity of the ports to the hinterland, optimizing cost and time of cargo movement through multi-modal logistics solutions including domestic waterways (inland water transport and coastal shipping);
 - **Port-linked Industrialization:** Developing port-proximate industrial clusters and Coastal Economic Zones to reduce logistics cost and time of EXIM and domestic cargo;
 - **Coastal Community Development:** Promoting sustainable development of coastal communities through skill development & livelihood generation activities, fisheries development, coastal tourism etc.
 - **Coastal Shipping & Inland Waterways Transport:** Impetus to move cargo through the sustainable and environment-friendly coastal and inland waterways mode.
- The key objectives of the National Rail Plan are:-
 - Formulate strategies based on both operational capacities and commercial policy initiatives to **increase modal share of the Railways in freight to 45%**.
 - Reduce transit time of freight substantially by **increasing average speed of freight trains to 50Kmph**.
 - Identify new Dedicated Freight Corridors.
 - Identify new High Speed Rail Corridors.
 - **Sustained involvement of the Private Sector** in areas like operations and ownership of rolling stock, development of freight and passenger terminals, development/operations of track infrastructure etc.

Why in News?

- Under the Sagarmala Programme, fourteen Coastal Economic Zones (CEZ) have been envisaged across the country.

4) National Rail Plan for India - 2030

About NRP

- Indian Railways have prepared a National Rail Plan (NRP) for India - 2030. The Plan is to **create a 'future ready' Railway system by 2030**.

Why in News?

- This information was given by the Minister of Railways, Communications and Electronic & Information Technology, Ashwini Vaishnaw in a written reply to a question in Lok Sabha.

5) Bureau of Indian Standards

About BIS

- Bureau of Indian Standards (BIS) is the **National Standard Body of India** established under the BIS Act 2016.
- BIS is responsible for the harmonious development of the activities of standardization, marking and quality certification of goods.
- BIS works under the aegis of the Ministry of Consumer Affairs, Food and Public Distribution.

Why in News?

- As a part of Azadi ka Amrit Mahotsav celebrations, a webinar was organized by the Bureau of Indian Standards on Engagement of Consumer Organization & NGOs in Standards Promotion Activities of BIS.

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News in Depth

AIR NEWS

1) National e-Vidhan Application programme

What's in the news?

- Nagaland Legislative Assembly (NLA) has become the first in the country to have operationalised the National e-Vidhan Application (NeVA) programme.
- E-Book installed in the NLA is the medium through which the member will be using the NeVA application in the Assembly in pursuit of the paperless Assembly.
- The E-Book remains inside the Assembly and is not meant to be removed from its placement position.
- A similar system outside the framework of NeVA has been in operation in the State of Himachal Pradesh and similar efforts have been made by other State Assemblies.

2) PM-DAKSH Yojana

About the Yojana

- The **Pradhan Mantri Dakshta Aur Kushalta Sampann Hitgrahi, PM-DAKSH Yojana** is being implemented by the Ministry of Social Justice and Empowerment from 2020-21.
- The scheme aims to cover **marginalized persons of Scheduled Castes, Other Backward Classes, Economically Backward Classes, De-**

notified Tribes and Safai karamcharis including waste pickers.

- Under this Yojana, eligible target groups are being provided skill development training programmes on (i) Up-skilling/Re-skilling (ii) Short Term Training Programme (iii) Long Term Training Programme and (iv) Entrepreneurship Development Program (EDP).
- The scheme is implemented by the **three Corporations**
 - National Scheduled Castes Finance and Development Corporation (NSFDC),
 - National Backward Classes Finance & Development Corporation (NBCFDC) &
 - National Safai Karamcharis Finance and Development Corporation (NSKFDC).

Why in News?

- The Ministry of Social Justice and Empowerment has released the details of the number of candidates trained, training completed and thereafter placements made by the Corporations for their respective target groups during 2021-22.

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THE HINDU EDITORIALS

1) Harm in the name of good

Background

- The UN General Assembly has proclaimed March 21 as the International Day of Forests to celebrate and raise awareness about the importance of forests.
- On this day, countries are encouraged to organise activities such as tree planting campaigns to help increase the green cover, conserve biodiversity, and fight climate change.

India and Planting of forests:

- The Indian government has been spending billions of rupees in its efforts to increase the green cover through tree planting.
- Recently, the Central government, through the National Afforestation and Eco-Development Board, launched an ambitious ₹19,000 crore plan for an afforestation project to rejuvenate 13 major rivers which would increase 'forest' cover by 7,417.36 square kilometres in the vicinity of these rivers.

Unintended impacts:

- Forests are complex ecosystems that are built over years due to the interplay of birds, mammals, reptiles, insects, amphibians, fungi, microorganisms, water, soil, environmental conditions, and other factors. Unless these players are part of the rebuilding process, trees will remain as green cover rather than the enchanting, natural, complex ecosystems that they are.
- If wrong areas are selected for plantation, the natural habitat may get altered, which will cause habitat specialist species to become extinct.
- This will make the local environment and ecosystem less resilient.
- The Ranibennur Wildlife Sanctuary in central Karnataka, which was designated to conserve the Great Indian Bustard have failed because of this unscientific thinking.

- Similarly, the Jayamangali Conservation Reserve, another grassland habitat in Karnataka, hosted wolves.
- But now there are leopards there as the whole area has been planted with acacia, anjan, eucalyptus and tamarind trees.

Planting native species:

- Though neem, peepal, banyan, and anjan may be native to India, they are non-native to many parts of the country.
- Planting any kind of native tree species may probably help in urban settings but not in natural habitats.
- There is a rule of thumb in the tree-planting world: One should plant the right tree in the right place.

Natural Regeneration:

- Another solution is to let forests come back on their own through protection. This is called assisted natural regeneration and is a cheaper and more effective method. Scientific studies have shown that natural regeneration absorbs 40 times more carbon than plantations and hosts a lot more biodiversity.
- But of utmost priority is the task of halting deforestation and protecting existing forests.

2) Clean energy should use the battery of a circular economy

Background:

- In the Budget speech this year, the Finance Minister emphasised the role of cleaner technologies such as solar energy and batteries in India's future economic growth.
- In addition, she mentioned the importance of transitioning to a circular economy from the existing linear one.

Market estimates:

- An efficient waste management ecosystem would be necessary to manage the enormous waste

generated by renewable energy projects in the coming decades.

- According to the International Renewable Energy Agency (IRENA), the cumulative waste generated by India's total installed solar capacity could be as high as 325 kilotonnes by 2030.
- A study by the Council on Energy, Environment and Water (CEEW) has estimated that India would need over 5,630 GW of solar and 1,792 GW of wind energy to achieve its net-zero target in the year 2070.
- A robust renewables waste management and recycling ecosystem could help people and India reduce environmental harm, provide energy security, and also create new jobs.
- **Six steps to nurture a circular economy in the Indian renewable energy industry are:**

1. Extended producer responsibility:

- The policymakers should revise existing electronic waste management rules to bring various clean energy components under their ambit.
- The Indian renewable energy industry has a complex structure that comprises various manufacturers, assemblers, importers and distributors.
- Hence, the revised regulations should clearly define the responsibilities of various stakeholders involved in the renewable energy value chain and provide annual targets for the collection and the recycling of waste.

2. Ban dumping and burning:

- Currently, landfilling is the cheapest and most common practice to manage renewable energy waste.
- All clean energy technologies thrive on metals and non-metals with different levels of toxicity.
- If the waste equipment is dumped in the open, then these elements could leach into the environment and enter the food chain. Studies show that the leaching of heavy metals such as lead and cadmium from solar photovoltaic modules could increase by 90% and 40%, respectively, under acidic conditions.

- Further, burning the polymeric encapsulant layer in solar photovoltaic modules releases toxic gases such as sulphur dioxide and some volatile organic compounds.

3. Investing in the research and development:

- Besides the traditional methods, investments in research and development could help discover new ways of recycling that result in higher efficiency and a less environmentally damaging footprint.
- Efficient metal recovery from waste provides a resilient supply of raw material for the renewable energy manufacturing industry.

4. Access to finance:

- The central government should nudge public and private sector banks to charge lower interest rates on loans disbursed for setting up renewable energy waste recycling facilities.
- A market for recycled materials could also be created through mandatory procurement by the renewable energy and other relevant manufacturing industries.

5. Improvement in product design and quality:

- Renewable energy component manufacturers should find substitutes for toxic metals such as cadmium and lead used in their products and simplify product designs to reduce recycling steps.
- The improvements in process efficiencies could curb waste creation at the source and its subsequent impact on the environment.

6. Stringent quality control standards:

- This will prevent premature end-of-life of components, and consequent waste creation. These quality enforcement could also position India's renewable energy industry as a global supplier of quality products.

Conclusion:

- The renewable energy recycling ecosystem has a complex structure where there are multiple actors involved, but it would be an integral part of our journey toward a sustainable future.

- It would also offer quality employment opportunities for the future generations as new jobs would be created across the entire value chain of waste management and recycling.

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INDIAN EXPRESS EXPLAINED

1) India's urban unemployment rate in numbers

Why in the news?

- India's urban unemployment rate jumped to 12.6 per cent in the April-June quarter of 2021, compared to 9.3 per cent in the January-March quarter.
- It, however, eased from the 20.8 percent level seen during the first wave of the Covid pandemic, the latest Periodic Labour Force Survey (PLFS) released by the National Statistical Office (NSO) shows.
- The current urban unemployment rate has come down 6.54 percentage points from 14.7 per cent in May 2021 to 8.16 per cent in January 2022 based on Center for Monitoring Indian Economy (CMIE) data.

The numbers

- The unemployment rate is defined as the percentage of unemployed persons in the labour force.
- Data shows that in the 15-29 age group, 25.5 percent of urban youth remained unemployed in April-June 2021 as against 34.7 per cent in April-June 2020 and 22.9 per cent in January-March 2021.
- **Urban females fared worse than urban males.** In the 15-29 age group, the unemployment rate for urban females stood at 31 per cent compared with 24 per cent for males during April-June 2021.
- The unemployment rate for urban females and males stood at 36 per cent and 34.3 percent, respectively, in April-June 2020.
- The urban unemployment PLFS is based on the current weekly status approach, under which a person is considered unemployed if he/she did not work even for one hour on any day during the week but sought or was available for work at least for one hour on any day during the period.
- **Labour force, according to current weekly status (CWS)**, is the number

of persons either employed or unemployed on an average in a week preceding the date of the survey.

- Labour force participation rate in current weekly status in urban areas for people aged 15 years and above was 46.8 per cent in the April-June quarter of 2021, up from 45.9 per cent in the same period a year ago. It was 47.5 per cent in January-March 2021.

CMIE data

- The urban unemployment rate rose to 9.30 per cent in December 2021 and has eased since then to 8.16 per cent in January and 7.55 per cent in February 2022, as per CMIE.

2) What is POSH, the law against sexual harassment in India?

Why in the news?

- Recently, Kerala High Court asked organisations associated with the film industry to take steps to constitute a joint committee to deal with cases of sexual harassment of women, in line with the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act of 2013.

The law against sexual harassment

- The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act was passed in 2013. It defined sexual harassment, laid down the procedures for a complaint and inquiry, and the action to be taken.
- It broadened the Vishaka guidelines, which were already in place.
- **The Vishaka guidelines** were laid down by the Supreme Court in a judgment in 1997. This was in a case filed by women's rights groups, one of which was Vishaka.

Guidelines and the law

- The Vishaka guidelines, which were legally binding, defined sexual harassment and imposed three key obligations on institutions — prohibition, prevention, redress. The Supreme Court directed that they

should establish a Complaints Committee, which would look into matters of sexual harassment of women at the workplace.

- The 2013 Act broadened these guidelines.
- It mandated that **every employer must constitute an Internal Complaints Committee (ICC) at each office or branch with 10 or more employees.**
- It lay down procedures and defined various aspects of sexual harassment, including the aggrieved victim, who could be a woman “of any age whether employed or not”, who “alleges to have been subjected to any act of sexual harassment”.
- This meant that the rights of all women working or visiting any workplace, in any capacity, were protected under the Act.

Definition of sexual harassment

- Under the 2013 law, sexual harassment includes “any one or more” of the following “unwelcome acts or behaviour” committed directly or by implication:
 - Physical contact and advances
 - A demand or request for sexual favours
 - Sexually coloured remarks
 - Showing pornography
 - Any other unwelcome physical, verbal or non-verbal conduct of sexual nature.
- The Ministry of Women & Child Development has published a Handbook on Sexual Harassment of Women at Workplace with more detailed instances of behaviour that constitutes sexual harassment at the workplace. These include, broadly:
 - Sexually suggestive remarks or innuendos; serious or repeated offensive remarks; inappropriate questions or remarks about a person’s sex life
 - Display of sexist or offensive pictures, posters, MMS, SMS, WhatsApp, or emails
 - Intimidation, threats, blackmail around sexual favours; also,

threats, intimidation or retaliation against an employee who speaks up about these

- Unwelcome social invitations with sexual overtones, commonly seen as flirting
- Unwelcome sexual advances.
- The Handbook says “unwelcome behaviour” is experienced when the victim feels bad or powerless; it causes anger/sadness or negative self-esteem. It adds unwelcome behaviour is one which is “illegal, demeaning, invading, one-sided and power based”.
- After the **Internal Complaints Committee (ICC)** recommendations, the aggrieved woman or the respondent can appeal in court within 90 days
- Section 14 of the Act deals with punishment for false or malicious complaints and false evidence.

3) Why is Mumbai experiencing a heatwave in March?

Why in the news?

- Recently, The Konkan region, including Mumbai, has been experiencing sweltering heat, with the maximum temperatures touching the 40 degrees mark.

What is a heatwave?

- A region or locality is considered to be under the influence of heatwave if the maximum temperature reaches or exceeds 40 degrees Celsius in the plains, or 30 degrees Celsius in hilly regions.
- Over the coastal regions, the threshold for the maximum temperature is 37 degrees.
- When the maximum temperature departure ranges between 4.5 and 6 degrees, **the India Meteorological Department (IMD) declares a heatwave.** For instance, if the normal temperature of a locality should be 40 degrees, and the actual recorded temperature is 45 degrees, the locality is under heatwave.
- Likewise, severe heatwave is declared when the recorded maximum

temperature of a locality departure from normal is over 6.4 degrees.

- This apart, if the locality records over 45 degrees and 47 degrees on any given day, then the IMD declares heatwave and severe heatwave, respectively.
- In India, heat waves occur from March to June, occasionally in July. The peak heatwave events have been reported in the month of May.
- As per the IMD, the most heatwave prone states are Punjab, Haryana, Delhi, Uttar Pradesh, Bihar, Jharkhand, West Bengal, Odisha, Madhya Pradesh, Rajasthan, Gujarat, Vidarbha, and parts

of Karnataka, Andhra Pradesh, Telangana, and occasionally over Tamil Nadu and Kerala.

So, why is Konkan experiencing heatwave conditions?

- The ongoing heatwave in Konkan, including Mumbai, is because it is under the direct influence of the prevailing heatwave in the adjacent Saurashtra-Kutch regions of Gujarat.
- The hot and dry winds from northwest India are reaching parts of Konkan.

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SANSAD TV

1) India-Japan Ties

Background:

- Japanese PM Fumio Kishida and Prime Minister Narendra Modi will hold talks to further strengthen the bilateral ties.
- Japan and India are expected to enhance economic cooperation and share assessments on the crisis in Ukraine and the Indo-Pacific as well.
- The friendship between India and Japan has a long history rooted in spiritual affinity and strong cultural and civilization ties.
- In fact the year 2022 also marks **seven decades of diplomatic relations between both nations.**

India Japan ties:

- In the year 2000 when Yoshiro Mori was the Prime Minister of Japan, **Japan-India Global Partnership in the 21st century was established.**
- In 2006 when Shinzo Abe was the PM, it was upgraded to **Global and Strategic Partnership** with the provision of annual Prime Ministerial Summits.
- Further it was upgraded to a '**Special Strategic and Global Partnership**' in 2014.
- The countries also share converging views on various issues and also have shared interests in various matters.
- There is also larger interest in the Indo Pacific ties which can be seen from the **QUAD initiative.**
- The bilateral security relationship between the two countries plays a key role in the geopolitical strategies in the Indo-Pacific region.

Economic Ties:

- The economic cooperation between the countries stands on **3T's i.e, Trade, Technology, Talent.**
- India and Japan are part of many groupings such as **SCRI (Supply Chain Resilient Initiative)**, started by **India, Japan and Australia.**
- The **Technical Intern Training Program (TITP)** is an ambitious

program to send Indian technical interns to Japan for on the job training for a period of three to five years.

- It is expected that this will pave the way for bilateral cooperation between the two countries in the area of skill development.
- Japanese are the true partners in any infrastructure programs that are developed in India. Eg. Delhi metro.
- Nearly **\$15 billion trade** was conducted between the countries in 2021.
- A **Comprehensive Economic Partnership Agreement (CEPA)** was signed between Japan and India in 2011.
- Under PM Shinzo Abe, 3.5 trillion yen (\$33.8 billion) was promised by Japan for **bullet trains, smart cities, rejuvenation of rivers like the Ganga and clean energy projects.**
- This has now been raised to 5 trillion yen (\$42 billion) of public and private investment in the next five years.



For doubts and queries email us at doubts@officerspulse.com

INFOGRAPHIC OF THE WEEK

1) SUGAMYA BHARAT ABHIYAN



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ABOUT THE CAMPAIGN

The **United Nations Convention on the Rights of Persons with Disabilities (UNCRPD)**, to which **India is a signatory**, casts an obligation on all the signatory governments to take appropriate measures to ensure to persons with disabilities access, on an equal basis with others, to the physical environment,



to transportation, to information and communications, including information and communications technologies and systems, and other facilities and services open or provided to the public, both in urban and rural areas.

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2015



The Accessible India Campaign was launched in 2015 by the Department of Empowerment of Persons with Disabilities (DEPwD), CC, to fulfill the obligations under the UNCRPD.

It is a nationwide Campaign for achieving universal accessibility for Persons with Disabilities (PwDs). It aims at providing equal opportunity to PwDs to participate in all the aspects of life and live independently.



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The Accessible India Campaign comprises of the following three components:

Built Environment Accessibility: It aims to provide an accessible physical environment for everyone. To achieve this, measures need to be undertaken to eliminate obstacles and barriers to indoor and outdoor facilities including schools, medical facilities, and workplaces.



Transportation System Accessibility: It focuses on providing persons with disabilities an equal right to travel and use public and private transportation infrastructure with dignity and independence.

Information and Communication Eco-System Accessibility



Access to information refers to all information. This can range from actions such as being able to read price tags, physically enter a hall, participate in an event, reading a pamphlet with healthcare information, understanding a train timetable, or viewing webpages.



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Objectives

The campaign is based on the principles of the Social Model of Disability, that disability is caused by the way society is organised, and not the person's limitations and impairments.



The physical, social, structural and attitudinal barriers prevent People with Disabilities from participating equally in the socio-cultural and economic activities. A barrier-free environment facilitates equal participation in all the activities and promotes an independent and dignified way of life.



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Why in News?

- According to data provided by the Social Justice and Empowerment Ministry, almost half the government buildings in States and Union Territories (48.5%) identified during access audits in 2016-17 have been made accessible to people with disabilities, while only around 8% of public buses have become fully accessible under the Accessible India campaign ending in June.
- When the Accessible India Campaign was launched in 2015, the deadline for making selected government buildings, transportation and websites accessible for persons with disabilities was March 2018. However, the deadline had been pushed back to June 2022. It includes making at least 25% of public buses fully accessible.
- The target also includes making at least 50% of Central and State government buildings meet accessibility standards.

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For free learning, visit www.officerspulse.com

Reference:

<https://www.thehindu.com/todays-paper/tp-national/very-few-buses-accessible-to-disabled/article65069507.ece>

References:**POLITY**

- <https://www.thehindu.com/news/national/corruption-pending-payments-mar-implementation-of-rural-schemes-parliamentary-panel/article65231823.ece>
- <https://www.thehindu.com/news/international/finland-crowned-worlds-happiest-nation-for-fifth-year/article65238374.ece>
- <https://ncst.nic.in/>
- <https://www.thehindu.com/news/national/maternal-mortality-ratio-of-india-declines-by-10-points/article65224041.ece>
- <https://theprint.in/theprint-essential/what-is-an-essential-religious-practice-and-why-hijab-didnt-make-the-cut-for-karnataka-hc/880827/>

ENVIRONMENT

- <https://www.thehindu.com/news/national/centre-launches-19000-cr-river-afforestation-plan/article65225046.ece>
- <https://www.thehindu.com/sci-tech/energy-and-environment/indias-solar-capacity-milestones-and-challenges/article65227709.ece>
- <https://www.thehindu.com/sci-tech/energy-and-environment/fewer-airguns-attract-chinese-visitor-to-arunachal/article65230771.ece>
- <https://www.thehindu.com/sci-tech/energy-and-environment/247-olive-ridley-hatchlings-released-into-sea-in-visakhapatnam/article65233729.ece>
- <https://www.wwfindia.org/about-wwf/priority-species/lesser-known-species/olive-ridley-turtle/https://www.hindustantimes.com/environment/india-unveils-arctic-policy-with-focus-on-climate-change-10-things-to-know-101647582789376.html>
- <https://www.thehindu.com/news/cities/mumbai/explained-what-is-the-mumbai-climate-action-plan/article65231102.ece>
- <https://www.thehindu.com/sci-tech/energy-and-environment/great->

[barrier-reef-suffers-widespread-coral-bleaching/article65238713.ece](https://www.thehindu.com/sci-tech/energy-and-environment/great-barrier-reef-suffers-widespread-coral-bleaching/article65238713.ece)

- <https://www.noaa.gov/education/resource-collections/marine-life/coral-reef-ecosystems>
- <https://www.thehindu.com/sci-tech/energy-and-environment/this-power-is-tax-free/article65233603.ece>
- <https://www.thehindu.com/news/cities/kolkata/study-reveals-significant-decline-in-golden-langur-habitat/article65240550.ece>

ECONOMY

- <https://pib.gov.in/PressReleasePage.aspx?PRID=1806081>
- <https://pib.gov.in/PressReleasePage.aspx?PRID=1805872>
- <https://pib.gov.in/PressReleasePage.aspx?PRID=1806191>

INTERNATIONAL RELATIONS

- <https://www.thehindu.com/news/international/explained-what-are-the-geneva-conventions-guidelines-during-wartime/article65217189.ece>
- <https://www.thehindu.com/news/international/russia-ukraine-conflict-icjs-provisional-measures-on-military-operations/article65234235.ece>

SCIENCE AND TECHNOLOGY

- <https://pib.gov.in/PressReleasePage.aspx?PRID=1802645>
- <https://www.thehindu.com/sci-tech/the-search-for-the-cosmic-dawn-of-first-light-is-far-from-over/article65217320.ece>
- <https://public.nrao.edu/telescopes/radio-telescopes/>
- <https://public.nrao.edu/telescopes/radio-telescopes/>
- https://science.nasa.gov/ems/05_radiowaves
- <https://www.thehindu.com/sci-tech/science/a-home-made-analogy-that-helps-study-solar-spicules-in-the-lab/article65217103.ece>
- <https://www.thehindu.com/news/international/what-are-manpads-that-the-west-is-sending-ukraine/article65218537.ece>

- <https://www.thehindu.com/sci-tech/science/the-genetic-variants-causing-severe-covid-19/article65221636.ece>
- https://www.business-standard.com/article/current-affairs/deep-ocean-mission-soon-to-study-origins-of-life-moes-official-122031800449_1.html

DEFENCE

- <https://www.thehindu.com/news/national/drdo-and-safran-to-develop-engine-for-indigenous-stealth-fighter/article65090271.ece>
- <https://www.thehindu.com/news/national/other-states/the-history-of-the-kuki-insurgency-in-manipur/article65143720.ece>
- <https://www.thehindu.com/news/national/india-faces-uncertainty-over-defence-supplies-from-russia-and-ukraine-as-also-caatsa-waiver/article65144678.ece>

ART AND CULTURE

- <https://whc.unesco.org/en/list/1502/>
- <https://www.thehindu.com/news/national/other-states/process-to-translate-publish-original-buddhist-manuscripts-from-nalanda-vikramshila-under-way-bihar-minister/article65236913.ece>
- <https://www.aicte-india.org/downloads/ancient.pdf>
- <https://www.thehindu.com/news/cities/kolkata/warren-hastings-garden-house-in-kolkata-blooms-again/article65217593.ece>

PIB

- <https://pib.gov.in/PressReleasePage.aspx?PRID=1805724>

- <https://pib.gov.in/PressReleasePage.aspx?PRID=1805795>
- <https://pib.gov.in/PressReleasePage.aspx?PRID=1806133>
- <https://pib.gov.in/PressReleasePage.aspx?PRID=1806617>
- <https://pib.gov.in/PressReleasePage.aspx?PRID=1807257>

AIR

- <https://newsonair.gov.in/News?title=Nagaland-Legislative-Assembly-becomes-first-in-country-to-have-operationalised-National-e-Vidhan-Application-programme&id=437442>
- <https://pmdaksh.dosje.gov.in/>

EDITORIALS

- <https://www.thehindu.com/opinion/oped/harm-in-the-name-of-good/article65243542.ece>
- <https://www.thehindu.com/opinion/oped/clean-energy-use-battery-circular-economy/article65231923.ece>

INDIAN EXPRESS

- <https://indianexpress.com/article/explained/explained-india-urban-unemployment-rate-in-numbers-7820915/>
- <https://indianexpress.com/article/explained/everyday-explainers/explained-posh-law-against-sexual-harassment-in-india-7825733/>
- <https://indianexpress.com/article/explained/konkan-mumbai-heatwave-explained-7820628/>

-
- SANSAD
- https://www.youtube.com/watch?v=uS7IRdNduQg&list=PLVOgwa_DiGzrOZ062PskBVE83abtupy3z&index=3