

Prevention of Money Laundering Act (PMLA)



❖ Context

- Recently, the government issued a notification bringing **transactions involving crypto assets under the Prevention of Money Laundering Act.**

❖ Key Highlights:

- It laid out the **nature of transactions to be covered under PMLA.** These are as follows:
 - Exchange between virtual digital assets & fiat currencies;
 - Exchange between one or more forms of virtual digital assets;
 - Transfer of virtual digital assets;
 - Safekeeping or administration of virtual digital assets or instruments enabling control over virtual digital assets;
 - Participation in and provision of financial services related to an issuer's offer and sale of a virtual digital asset.
- **Significance** : This move is aimed at widening the taxation and regulatory net and giving teeth to agencies.
 - The measure is expected to aid investigative agencies in carrying out action against crypto firms.
 - But there are concerns over the lack of a central regulator.
- **Legal Status of Crpto in India :**
 - In the Union Budget last year, even though the government brought in a tax for cryptocurrencies, it did not proceed with framing regulations.
 - Earlier, the Reserve Bank of India had proposed a ban that was set aside by a court order.
 - In July last year, flagging the RBI's concerns, Finance Minister told Parliament that "international collaboration" would be needed for any effective regulation or ban on cryptocurrency.
 - From April 2022, **India introduced a 30% income tax on gains** made from cryptocurrencies.
 - In July 2022, rules regarding 1% tax deducted at source on cryptocurrency came into effect.

❖ About PMLA 2002:

- Enacted in **2002** and it came into force in 2005.
 - It was a response to **India's global commitment (including the Vienna Convention)** to combat the menace of money laundering.
 - It is at the core of India's legal framework **to combat money laundering.**
 - This act's provisions **apply to all financial institutions**, including banks (including the RBI), mutual funds, insurance companies, and their financial intermediaries.
 - The act was **amended in 2005, 2009 and 2012.**
 - **Agencies administering the PMLA :**
 - The **Directorate of Enforcement in the Department of Revenue, Ministry of Finance** is responsible for investigating the cases of the offense of money laundering under PMLA
 - **Financial Intelligence Unit – India (FIU-IND)** under the **Department of Revenue, Ministry of Finance** is the central national agency responsible for receiving, processing, analyzing and disseminating information relating to suspect financial transactions to enforcement agencies and foreign FIUs.
- ### ❖ About Money Laundering:
- Money laundering is the **illegal process of making large amounts of money generated by a criminal activity**, such as drug trafficking or terrorist funding, appear to have come from a legitimate source.
 - The money from the criminal activity is considered dirty, and the process "launders" it to make it look clean.

Short-Distance Migrations

❖ Context

- According to new research from the University of East Anglia, short-distance migration accounts for the largest portion of global migratory movements and is critical for climate change adaptation.

❖ Key Highlights:

- Contrary to popular belief, most migratory movements are caused by economic, social, and environmental variables such as climate change.
- The study focuses on those living in the drylands of India and parts of Africa, where poor and unpredictable water supply and high temperatures exert stress on natural resource-based livelihoods, forcing communities to migrate.
- Supporting and enabling short-distance migration will help people to continue to adapt to the pressures in their lives.
- The research highlights that most mobility, especially that influenced by environmental change, will remain local.



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News in Between the Lines

The surge in Forest Fires



❖ Context

➤ The state of Odisha in India has experienced a sudden surge in forest fires, causing significant loss of flora and fauna.

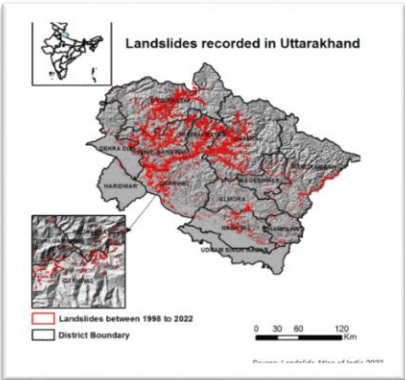
❖ Key Highlights:

- A prolonged dry spell since October 2022 and the accumulation of inflammable materials such as dry leaves are some of the reasons behind the fires.
- Human-made reasons,
 - tribal people setting fire on forests for shifting cultivation,
 - collection of mahua flowers and kendu leaves,
 - and cultivating turmeric in Baliguda forest division in Kandhamal district, may also have contributed to the situation.
- Concerns: The regeneration of forests will be affected due to the wildfires, and the loss of timber, fruit-bearing trees, medicinal plants, and wildlife habitat poses a threat.

❖ Steps Taken:

- The forest department had constituted a nine-member task force in 2021 to review the incidents of forest fires, and their causes, and suggest improvements.
- Nearly 3,000 forest personnel have been engaged to control the state-wide fires, and 16,000 Vana Surakshya Samitis and 280 special squads are also on the ground trying to douse the fires.

Most Landslide Prone Areas



❖ Context

➤ According to data from the Indian Space Research Organisation (ISRO), Rudraprayag and Tehri Garhwal in Uttarakhand are the most prone to landslides in India.

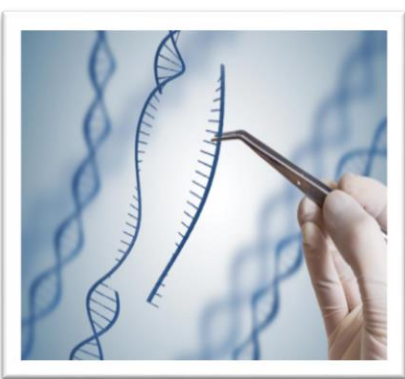
❖ Key Highlights:

- The Landslide Atlas of India 2023, created by the National Remote Sensing Centre, compiled an all-India database of nearly 80,000 landslides that occurred from 1998 to 2022.
- It was done with a risk analysis based on the density of human and livestock populations.
- Other high-risk districts identified include Rajouri, Thrissur, Pulwama, Palakkad, Malappuram, South Sikkim, East Sikkim, Kozhikode, Jammu Kashmir, and Sikkim.
- Between 1988 and 2022, the maximum number of landslides were recorded in Mizoram, followed by Uttarakhand and Tripura.
- The report highlighted that landslides rank third in terms of deaths among natural disasters globally.

❖ What are the main reasons?

- Deforestation due to unplanned urbanization and human greed have increased the risk of such incidents.
- Climate change is also causing heavy rainfall that erodes steep slopes with loose soil, leading to an increasing number of landslides.

Gene-Editing in Embryos



❖ Context

➤ A new study published in the journal Nature Communications highlights concerns regarding gene editing in embryos.

❖ Key Highlights:

- The study reveals that deleting harmful disease-causing mutations through gene editing could be counterproductive and create more problems than it solves.
- The Chinese scientist who announced the birth of gene-edited twins in 2018 used CRISPR, a gene editing technology, to make the embryos resistant to the human immunodeficiency virus, which many scientists condemned.
- The researchers used CRISPR to induce a break in the DNA at the mutation site and then repair the break site by copying genetic information from the normal copy of the gene onto the altered strand of the DNA.
- However, the extensive copying of genetic information from one parent to another due to CRISPR could give rise to two mutant copies of the disease-causing gene in the embryo, increasing the risk of diseases.

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- Additionally, whole genome amplification, a technology used to increase the number of DNA samples, can reduce the accuracy of genetic testing, which could lead to misdiagnosis of embryos.
- The researchers proposed using stem cells from gene-edited embryos as an alternative method for testing.

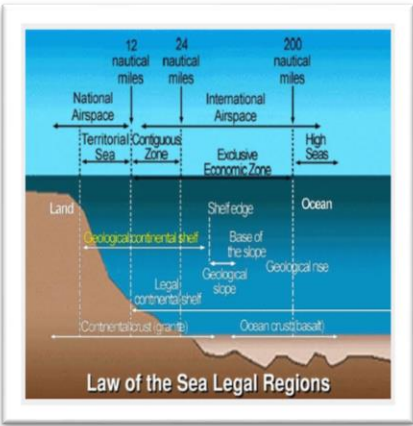
❖ **Context**

- Recently, a draft international agreement referred to as the UN High Seas Treaty was finalised to govern the conduct of governments in 'open seas'.

❖ **Key Highlights:**

- This agreement is **still in the draft stage**, when it is ratified by countries (requiring them to also pass it in their own Parliaments), **it will become legally binding**.
- Also referred to as the '**Paris Agreement for the Ocean**', the treaty to deal with Biodiversity Beyond National Jurisdiction has been under discussion for several years.
- The draft treaty was negotiated under the United Nations Convention on Laws of the Sea (UNCLOS) of 1982 which governs the rights of countries regarding marine resources.
- The proposed treaty concerns the ocean existing beyond the **Exclusive Economic Zones (EEZ)** that lie from the coast of a country to about 200 nautical miles (or 370 km into the sea), till where it has special rights for exploration.
- **High Sea :**
 - Open Seas or High Sea is a majority of the world's oceans that lie beyond the jurisdiction of any one country.
 - Currently, it is estimated high or open seas **constitute two-thirds of the world's oceans, and only one per cent of them are legally protected**.
 - At present, **every country has the right to access open seas**.
 - It resulted in large-scale drilling and trawling operations for catching fish and other animals for commercial purposes.

UN High Seas Treaty Draft Agreement



❖ **Context**

- Recently, India recorded deaths of two people, one each in Karnataka and Haryana, due to the Influenza A subtype H3N2 virus.

❖ **H3N2 Virus:**

- **About :**
 - Influenza viruses, which cause the infectious disease known as flu, are of four different types: A, B, C and D.
 - Influenza A is further classified into different subtypes and one of them is the H3N2.
 - **H3N2 caused the 1968 flu pandemic** that led to the death of around one million people globally and about 100,000 in the US.
- **Symptoms :**
 - Cough, fever, body ache and headache, sore throat, a runny or stuffy nose and extreme fatigue.
 - Nausea, vomiting and diarrhoea have been seen in very few cases.
 - An infection caused by H3N2 generally lasts for five to seven days.
- **Vulnerable Group :**
 - This virus usually preys on individuals **below the age of 15 years or above 50 years of age**.

H3N2 Virus



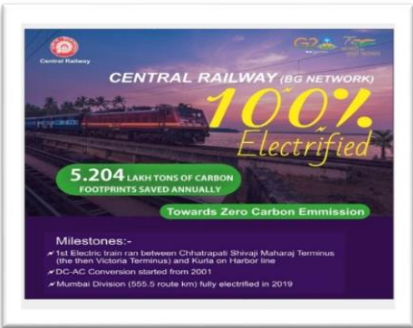
❖ **Context**

- The Central Railway has achieved 100 percent electrification of its broad gauge network of 3,825 kilometers.

❖ **Key Highlights:**

- The 52-kilometre Ausa Road-Latur Road stretch in Solapur division was the last non-electrified section.
- This move helps in reducing carbon footprints of 5.204 lakh tonnes every year as well as savings of 1670 crore rupees.
- It will reduce fuel bills and help earn carbon credit.

Broad Gauge



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Kodaikanal Solar Observatory (KoSO)



❖ Context

- Solar physicists at the **Indian Institute of Astrophysics (IIA)**, Bengaluru, and **Aryabhata Research Institute of Observational Sciences (ARIES)**, Nainital, both under the Department of Science and Technology, have now digitised 1.48 lakh solar images captured since 1904.

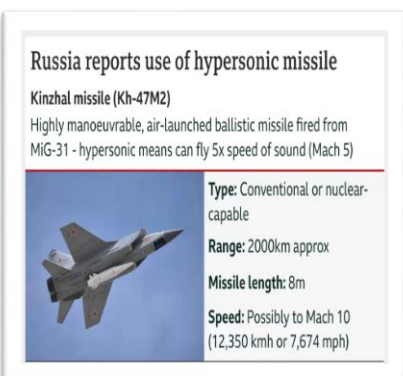
❖ Key Highlights:

- For well over a century, the **Kodaikanal Solar Observatory (KoSO)** has been observing the Sun, capturing images of sunspots, and recording changes in its behaviour.

❖ About Kodaikanal Solar Observatory

- KoSO, which is owned and operated by IIA, is one of the world's oldest observatories studying the Sun.
- The **Solar Physics Observatory** opened on April 1, 1899, and was later named KoSO.
- **Location- Kodaikanal** in present-day Tamil Nadu was chosen for its **high altitude and dust-free environment**.
- During the early decades of its operation, the **Bhavnagar Telescope**, named after the Maharaja of Bhavnagar, was one of the more **famous instruments at KoSO**.
- This 16-inch Newtonian (later Cassegrain) mobile telescope remained India's largest from 1888 to 1968.
- **Function :**
 - **Since 1904**, white light images of the Sun (similar to viewing it with the naked eye using solar filters) have been captured every day, using a 6-inch telescope.
 - Visible light images are taken because they reveal sunspots on the surface of the Sun.

Hypersonic Missiles



❖ Context

- At least nine people have died in a new wave of strikes across Ukraine in which Russia used powerful weapons, including rare hypersonic missiles.

❖ About Hypersonic Missiles:

- A hypersonic missile, such as **Kinzhal**, is capable of **flying at least at the speed of Mach 5**, i.e. five times the speed of sound, and is manoeuvrable.
- The manoeuvrability of the hypersonic missile is what differentiates it from a ballistic missile, as the latter follows a set course or a ballistic trajectory.
- Unlike ballistic missiles, **hypersonic missiles do not follow a ballistic trajectory** and can be manoeuvred to the intended target.
- This makes them extremely lethal because by the time they are detected by ground-based radars, they are already quite near to their target.
- There are **two types of hypersonic weapons systems**:
 - **Hypersonic Glide Vehicles (HGV)** and Hypersonic Cruise Missiles.
 - The HGVs are fired from a rocket before gliding to the intended target while the **hypersonic cruise missile** is powered by air-breathing high-speed engines or 'scramjets' after acquiring their target.

Improving Economic Viability of Gaushalas



❖ Context

- **NITI Aayog** has released the **Task Force report** titled "**Production & Promotion of Organic and Bio fertilisers with Special Focus on Improving Economic Viability of Gaushalas**".

❖ Key Highlights:

- The Task Force was constituted by NITI Aayog to
 - suggest measures to make Gaushalas economically viable,
 - address the problem of stray and abandoned cattle,
 - and effective utilisation of cow dung & cow urine in the agriculture & energy sectors.
- It has proposed making it mandatory for fertiliser companies to sell 10-20% of biofertilizer or organic manure with urea to substantially increase their offtake and give a boost to gaushala economy.
- **Note:**
 - Viability Gap Finance means a grant to support projects that are economically justified but not financially viable.

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