

NEWS TODAY

CENTRE LAUNCHES INITIATIVES TO ENHANCE INDIA'S PREPAREDNESS AND RESPONSE TO POTENTIAL ANIMAL PANDEMICS

- India has **one of the largest national livestock populations in the world** at 536.76 million, according to the livestock census, 2019, which is a **key source of income of nearly 80 million farmers**.
 - **Estimated indirect losses in India from zoonotic diseases is around \$40 Billion.**
- **Ministry of Fisheries, Animal Husbandry & Dairying launched following initiatives:**

<p>Animal Pandemic Preparedness Initiative (APPI)</p>	<ul style="list-style-type: none"> ● Key pillars under APPI: <ul style="list-style-type: none"> ➤ Integrated disease surveillance & monitoring (built on National Digital Livestock Mission). ➤ Creating disease modelling algorithms and early warning systems. ➤ Strengthening Regulatory system (e.g., Nandi online portal and Field trial guidelines). ➤ Initiate targeted R&D to develop vaccines/diagnostics/therapies for priority diseases.
<p>World Bank-funded Animal Health System Support for One Health (AHSSOH)</p>	<ul style="list-style-type: none"> ● AHSSOH aims to create an ecosystem for a better animal health management system using One Health approach. ● Will be implemented over a 5 year period as a Central sector scheme. ● It will initially cover five states – Assam, Odisha, Madhya Pradesh, Maharashtra and Karnataka. ● AHSSOH project aims to <ul style="list-style-type: none"> ➤ Strengthen district laboratories, ➤ Provide mobile veterinary units in remote locations and high-risk areas, ➤ Upgrade dispensaries and hospitals, besides training veterinarians, as well as private diagnostic professionals.

JUPITER ICY MOONS EXPLORER (JUICE) MISSION LAUNCHED BY EUROPEAN SPACE AGENCY (ESA)

● Utilizing Earth, Moon, and Venus gravity assists, JUICE will go into orbit around Jupiter in 2031.

● Objectives of the mission includes

- **Detailed observations of Jupiter and its three large ocean-bearing moons** (both planetary objects and possible habitats) – Ganymede, Callisto and Europa.
- **Monitor Jupiter's complex magnetic, radiation and plasma environment** and its interplay with the moons.
- **Study wider Jupiter system as an archetype for gas giants systems** across the Universe.

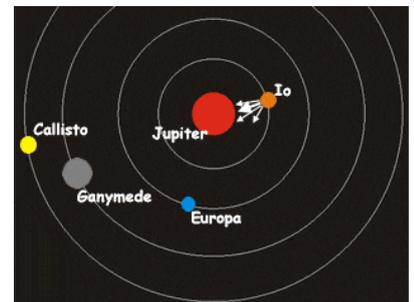
● **Jupiter is the largest planet** in solar system and is also **planet with maximum number of moons**.

➤ **Jupiter's four largest moons** are called Galilean satellites: **Io, Europa, Ganymede, and Callisto**.

- **Io is most volcanically active body** in solar system.
- **Europa's surface** is mostly **water ice**.
- **Ganymede is largest moon in solar system** and is only moon known to **have its own internally generated magnetic field**.
- **Callisto's rocky, icy surface** is the oldest and most **heavily cratered in our solar system**.

● **Other Missions to Jupiter**

- **Past:** NASA's Galileo, Voyager 1 and Voyager 2, Pioneer 10 and 11.
- **Current:** NASA's Juno.
- **Future:** NASA's Europa Clipper.



RANSOMWARE REPORT-2022 RELEASED BY INDIAN COMPUTER EMERGENCY RESPONSE TEAM (CERT-IN)

- CERT-In, under Ministry of Electronics and Information Technology, is the national nodal agency for responding to computer security incidents.
- Key highlights of the report
 - Ransomware incidents have gone up by 53% in 2022 over 2021.
 - Not only money, but Geo political conflicts also influenced ransomware attacks this year.
 - Broadened Ransomware attacks across critical sectors with increased frequency and complexity of the attacks.
 - Lockbit was the most prevalent ransomware variant in India, followed by Makop and DJVU/Stop ransomware.
 - New variants such as Vice Society and BlueSky were noticed in 2022.
 - IT and IT-enabled services sector was the most impacted sector, followed by finance and manufacturing sectors.
 - Ransomware-as-a-service (RaaS) ecosystem becoming prominent.
 - Makop and Phobos Ransomware families mainly targeted medium and small organizations, while Djvu/Stop variants used for attacks on individuals.
- Ransomware is a category of malware that gains access to systems and makes them unusable to its legitimate users, either by:
 - Encrypting different files on targeted systems, also known as Crypto Ransomware.
 - Locking the system's screen unless a ransom is paid, also known as Locker Ransomware.

INDIA'S BUSINESS WITH ITS NEIGHBORHOOD IS STAGNANT THOUGH IT OFFERS BETTER TERMS THAN CHINA

- A recent analysis has shown that India's post-pandemic trade with its South Asian neighbors has fallen to its lowest in some ten years, falling under 3%.
 - This includes seven South Asian countries, i.e. Afghanistan, Bangladesh, Bhutan, Maldives, Nepal, Pakistan and Sri Lanka.
 - In 2021-22 India's largest export market in the region was Bangladesh, followed by Nepal and Sri Lanka.
- In comparison, China's overall trade with these countries was 65% higher than India despite lower tariffs by India.
- Reasons for Low Trade
 - Trade within the region is hindered by Para-tariffs (border charges and fees), cumbersome rules, poor infrastructure, high logistics cost, informal trade, coupled with other non-tariff barriers etc.
 - It is made worse by Covid-19 pandemic and the latest economic crisis in countries including Sri Lanka and Pakistan.
- Initiatives to Increase Trade in the Region
 - Better connectivity such as BBIN (Bangladesh-Bhutan-India-Nepal) Motor Vehicles Agreement.
 - Reduced logistics cost through plans for development of waterways.
 - Increased Cross Border Energy Cooperation such as BBIN Cross-Border Power Exchange etc.
 - Several agreements like SAARC Preferential Trading Arrangement (SAPTA), South Asian Free Trade Area (SAFTA), Indo-Sri Lanka Free Trade Agreement to facilitate trade.

NASA-ISRO SAR MISSION (NISAR) SATELLITES TO MAP HIMALAYAS SEISMIC ZONE

- NISAR, a Low Earth Orbit (LEO) observatory, is slated to be launched in 2024 by ISRO's Geosynchronous Satellite Launch Vehicle Mark II rocket.
 - It will feature advanced radar systems, L- and S-band radar built by NASA and ISRO respectively, to add to current understanding on Earth's crust.
 - It will study Earth's land and ice surfaces twice every 12 days to study natural hazards, melting sea ice, groundwater supply, volcanoes etc.
 - It will also survey forests and agricultural regions to help understand carbon exchange between plants and atmosphere.
- Significance of NISAR for Himalayan region
 - Determining how strain is building up in various parts of the Himalayas.
 - Strain refers to deformation that occurs in rocks when it is under pressure from other rocks, usually due to movements of continental plates.
 - Study deformation patterns, such as in Joshimath, and create a deformation map.
 - Map out the most earthquake-prone regions in the Himalayas with unprecedented regularity for advanced warning of land subsidence and related events such as flash floods, destruction of hydropower etc.

Seismic Zone Map of India: -2002

About 59 percent of the land area of India is liable to seismic hazard damage

Zone	Intensity
Zone V	Very High Risk Zone Area liable to shaking Intensity IX (and above)
Zone IV	High Risk Zone Intensity VIII
Zone III	Moderate Risk Zone Intensity VII
Zone II	Low Risk Zone VI (and lower)

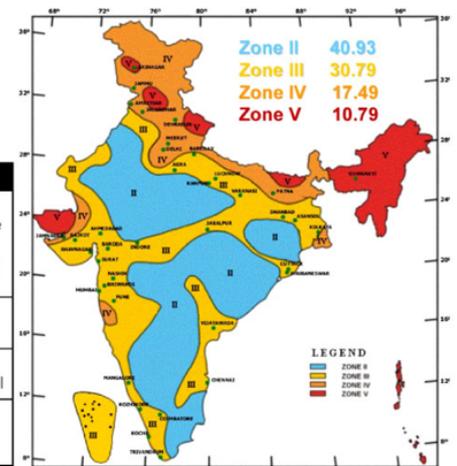


Fig. 1 Seismic zonation and intensity map of India

UNIVERSITY GRANTS COMMISSION (UGC'S) DRAFT 'GUIDELINES FOR INCORPORATING INDIAN KNOWLEDGE IN HIGHER EDUCATION CURRICULA'

- Draft guidelines from UGC aims to help colleges and universities develop courses for introducing students to the Indian Knowledge System (IKS).
 - IKS encompasses knowledge in various disciplines that emerged systematically from ancient times in India.
 - IKS also includes traditions and practices that various communities of India have evolved, refined and preserved over generations.
- National Educational Policy 2020 (NEP 2020) recommends incorporation of IKS into curriculum at all levels of education.
- Draft guidelines also provides few model curricula of courses in IKS for designing appropriate courses including:

Mathematics	<ul style="list-style-type: none"> ● Bodhāyana Theorem (so called Pythagoras Theorem). ● Pāṇini's Aṣṭādhyāyī. ● Mathematics in the Jaina Texts: Law of indices, Permutations and Combinations. ● Āryabhaṭīya of Āryabhaṭa: Algorithm for finding the square root, Some algebraic identities, Area of a circle, trapezium and other figures. ● Brāhmasphuṭasiddhānta of Brahmagupta: Interest calculations, Progressions: Arithmetic and Geometric, Mathematical operations etc. ● Bījagaṇita of Bhāskarācārya: Algebra. ● Līlāvati of Bhāskarācārya. ● Gaṇitakaumudī of Nārāyaṇa Paṇḍita: Solutions of quadratic equations. ● Kerala School of Astronomy and Development of Calculus.
Indian Health Sciences	<ul style="list-style-type: none"> ● Vedic foundations of Ayurveda. ● Suśruta-Samhitā (sections on plastic surgery, cataract surgery and anal fistula).
Indian Astronomy	<ul style="list-style-type: none"> ● Basic ideas of the planetary model of Aryabhata and its revision by Nilakantha. ● Astronomical endeavours of Jaisingh, Sankaravarman, Chandrasekhara Samanta.
Indian Architecture and Town Planning	<ul style="list-style-type: none"> ● Importance of Sthapatya-veda ● Building of Jaipur in the 18th century. ● Ancient cities of the Indus Saraswati region.

ALSO IN NEWS

<p>Stockholm Agreement</p>	<ul style="list-style-type: none"> ● A major prisoner swap is underway between warring sides in Yemen conflict. ● Deal is a follow-up to the 2018 Stockholm Agreement - an accord between the parties to the conflict in Yemen with three main components: <ul style="list-style-type: none"> ➤ Hudaydah Agreement on the City of Hodeidah and Ports Hodeidah, Salif and Ras Isa. ➤ A Prisoner Exchange Agreement for the exchange prisoners, detainees, missing persons, arbitrarily detained and forcibly disappeared persons, and those under house arrest. ➤ The Taiz Agreement on Statement of Understanding on Ta'iz.
<p>Chabahar Port</p>	<ul style="list-style-type: none"> ● First meeting of India-Central Asia Joint Working Group on Chabahar port took place in Mumbai. ● Chabahar Port is located in Sistan-Baluchestan province in South-eastern Iran, on Gulf of Oman. <ul style="list-style-type: none"> ➤ In 2016, India signed a tripartite agreement with Iran and Afghanistan to develop the Shahid Beheshti Terminal at Chabahar. ● It is considered a crucial gateway that would enable India to bypass Pakistan and access Afghanistan, and ultimately Central Asia. ● It is at a strategic location near Strait of Hormuz and Indian Ocean.
<p>Enforcing own syllabus will be RTE Act Violation</p>	<ul style="list-style-type: none"> ● National Commission for Protection of Child Rights (NCPCR) has asked states/UTs to direct all schools to adhere to curriculum and evaluation process laid out by the NCERT and SCERTs. ● NCPCR stated that any attempt by boards to enforce a curriculum of their own shall be treated as a violation of the Right to Education (RTE) Act 2009. <ul style="list-style-type: none"> ➤ RTE Act speaks of uniformity in curriculum in all schools and quality education.
<p>Gond Painting</p>	<ul style="list-style-type: none"> ● Gond painting of Madhya Pradesh has received the Geographical Indication (GI) tag. ● Gond Painting is a traditional art of Gond Tribe with Dindori district of Madhya Pradesh as the original source. ● Based on the belief that 'viewing a good image brings good luck', the Gond painting shows nature, trees, plants, animals, moon, sun, river, drains, God, Goddesses and Geometric patterns. <ul style="list-style-type: none"> ➤ It is mainly done on walls and floors of houses. ➤ Natural colors obtained from various sources like flowers, stones, etc. are used.



 <p>Second Meeting of G20 Finance Ministers and Central Bank Governors held</p>	<ul style="list-style-type: none"> ● Key takeaways from the G20 meetings: <ul style="list-style-type: none"> ➤ Successful discussions on debt restructuring and debt vulnerabilities of poor economies. ➤ Primarily Indian initiative of reforming multilateral development banks (MDBs) was very well received. ➤ Greater fund flow to poor and developing countries to tackle climate change and greater participation of private financiers to realise SDGs. ➤ Achieving a fair, sustainable and modern international tax system and fast implementation of two-pillar international tax package. ➤ General consensus on regulations relating to crypto assets.
 <p>Bharat Gaurav Train</p>	<ul style="list-style-type: none"> ● Government launched Bharat Gaurav Tourist train which will cover prominent places associated with B.R. Ambedkar as well as important Buddhist heritage sites. <ul style="list-style-type: none"> ➤ Sites associated with Dr. Ambedkar: New Delhi, Mhow in MP (Birthplace), Nagpur. ➤ Buddhist sites: Sanchi, Sarnath, Gaya, Rajgir, and Nalanda. ● Under the 'Dekho Apna Desh' initiative, the IRCTC is operating several Bharat Gaurav tourist trains on various theme-based circuits across India. <ul style="list-style-type: none"> ➤ Other circuits include Ramayana Circuit, Buddhist Circuit, North East Circuit etc.
 <p>Interoperable Criminal Justice System (ICJS)</p>	<ul style="list-style-type: none"> ● Ministry of Home Affairs' (MHA) e-prosecution portal has added a new feature to fix accountability of government lawyers. ● e-prosecution module is part of ICJS that seeks to enable seamless transfer of data and information among different pillars of criminal justice system, like courts, police, jails etc., from one platform. ● Earlier, main pillars of ICJS, including e-police, e-courts, e-jails, e-forensics and e-prosecution were developed independently in form of Crime and Criminal Tracking Network and System (CCTNS).
 <p>Ethylene Oxide</p>	<ul style="list-style-type: none"> ● European commission classified ethylene oxide as a pesticide residue (earlier classified as fumigant). <ul style="list-style-type: none"> ➤ This means agricultural products being exported to European Union will now be mandatorily tested. ● About Ethylene oxide <ul style="list-style-type: none"> ➤ A flammable colorless gas with a sweet odour. ➤ Used primarily to produce other chemicals, including antifreeze. ➤ In smaller amounts, ethylene oxide is used as a pesticide and a sterilizing agent. ➤ Classified as carcinogenic and mutagenic.
 <p>Cyclone Ilsa</p>	<ul style="list-style-type: none"> ● Tropical Cyclone Ilsa made landfall in Western Australia. ● Conditions favorable for Tropical cyclone <ul style="list-style-type: none"> ➤ Large sea surface with temperature higher than 27° C. ➤ Presence of the Coriolis force enough to create a cyclonic vortex. ➤ Small variations in the vertical wind speed. ➤ A pre-existing weak low-pressure area or low-level-cyclonic circulation. ➤ Upper divergence above the sea level system.
 <p>Places in News</p>	<p>Spain (Capital: Madrid)</p> <ul style="list-style-type: none"> ● India-Spain Joint Commission meeting held. ● Political Boundaries <ul style="list-style-type: none"> ➤ Spain is one of the two nations on Iberian Peninsula (other is Portugal) in South Western Europe. ➤ It shares its border with Andorra, France, Gibraltar (UK), Portugal and Morocco. <ul style="list-style-type: none"> ■ It shares maritime borders with Algeria and Italy. ■ Strait of Gibraltar separates Spain from Africa. ● Geographical Features: <ul style="list-style-type: none"> ➤ Highest Point: Mulhacen in the Sierra Nevada. ➤ Major Rivers: Ebro, Tagus, Douro (Duero), etc.  <p>© Encyclopædia Britannica, Inc.</p>