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Brahmaputra Floods

- Tree rings grow wider in years when soil moisture is high.
- Indirectly, wider rings reflect more rainfall and higher river runoff.
- A study has analysed the tree rings at sites close enough to be affected by the same weather systems as Brahmaputra watershed.
- With this, the scientists built a 696-year chronology (1309 to 2004).
- These rings showed that the post-1950s period was actually one of the driest since the 1300s. There have been much wetter periods in the past.
- Projecting from all those periods, the researchers concluded that destructive floods probably will come more frequently than thought.
- If one projects from modern discharge records, one would be underestimating the danger by 24% to 38%.
- Higher temperatures drive more evaporation of ocean waters, and in this region that water ends up as monsoon rainfall.
- That is why warming climate will intensify the monsoon rains in coming decades, and in turn increase seasonal flooding.

Damaru-Inspired Lattice

- IIT Kanpur developed a ‘Dambaru’ or ‘Damaru’ inspired Lattice.
- A lattice is an ordered array of points describing the arrangement of particles that form a crystal.
- IIT Kanpur has demonstrated that one can get a wider variation of propagation and stop bands with the use of these micro-structured hour-glass shaped meta-structure in the lattice unit.
- These meta-structures have application in electro-magnetic and sonic wave absorption which could create ‘invisibility’ of an object in optical or acoustic domain.
- IIT Kanpur has shown the nature of stiffness of a vibrating medium could be altered by controlling the lattice micro-structure from regular honeycomb to auxtetic honeycomb structure.
- This has wide applications in the field of vibration isolation in high speed trains, stealth submarines and helicopter rotors.
- This work is sponsored by a SPARC project of MHRD.

IFSCA, an IAIS Member

- Gujarat International Finance Tec (GIFT) City is India's first operational smart city and international financial services centre.
- GIFT City's regulator International Financial Services Centres Authority (IFSCA) has become an International Association of Insurance Supervisors (IAIS) member.
- Now, IFSCA would have access to IAIS's global network and would exchange ideas and information with other global regulators.
- This would develop a vibrant global insurance hub in IFSC at GIFT City.
- This would connect GIFT IFSC with global insurance institutions.
- It would facilitate IFSCA in the joint development of global insurance business with other global centres.

IAIS

- Established in 1994 with Switzerland as its headquarter, IAIS is a voluntary membership organisation of insurance supervisors and regulators.
- It is the international standard-setting body responsible for developing and assisting in the implementation of principles, standards, and other supporting material for the supervision of the insurance sector.
- Indian Insurance Regulatory and Development Authority (IRDAI) is among the leading members of IAIS.

UK approves Covid-19 Vaccine

- UK becomes first country to approve Pfizer-BioNTech Covid-19 vaccine for use.
- The British regulator declared that the vaccine offers protection of up to 95% and is safe to be used for immunisation against Covid-19.
- Immunisation in UK is expected to start within days and will be delivered to high-priority groups first.

State of the Global Climate Provisional Report

- This report was released by the World Meteorological Organization.
- The decade 2011-2020 would be the warmest ever on record.
- Also, the year 2020 is set to be among the three warmest on record.
- The record heat in 2020 has been despite La Niña conditions prevailing in the equatorial Pacific Ocean.
- Scientific evidence indicates increasing temperatures are a direct result of human-led global warming, an impact of Green House Gas emission.
- After record GHG levels of 2019, there has been a slight dip this year due to measures taken by countries to fight the ongoing COVID-19 pandemic.
- Global sea-level rise was similar to 2019 values and the general decreasing

trend has continued.
- Extreme weather events such as tropical cyclones, floods, heavy rainfall and droughts which are an expensive consequence of global warming impacted many parts of the world.
- The report states that climate induced human migration is one of the least understood impact of anthropogenic climate change.

Migratory Bird Festival

- Bihar is holding a bird festival for the first time as part of its initiative to save migratory birds that arrive in the state in large numbers every year.
- The three-day festival is being organised in Bhagalpur district of Bihar.
- The 60-km stretch of Bihar's Vikramshila Dolphin Sanctuary between Sultanganj and Kahalgaon had long been a hub of migratory birds.
- The 'ringing of birds' involves trapping them in nets and snares.
- Subsequently, they are weighed and their details logged before a metal ring inscribed with a unique number is tied to their tibia bone.
- This helps birdwatchers and professional conservationists log their presence across the globe.

Source: The Indian Express, AIR, Business Line, Down To Earth

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