

May - 04

TNPSC BITS

- ❖ Rockwell Automation, an American company into industrial automation and digital transformation, has announced its plans to open a new manufacturing facility in Chennai.
- ❖ The United Nations recently launched a new panel on “Critical Energy Transition Minerals”.
 - It aims to address the challenges of the “material-energy nexus” and promote responsible and fair value chains.
- ❖ The European Society for Clinical Microbiology and Infectious Diseases (ESCMID) and the Global Leaders Group (GLG) on AMR jointly organised a high-level event, ‘Forging partnerships between science and policy’.
 - It aims to position research, science and implementation on antimicrobial resistance (AMR) into the political agenda.

TAMIL NADU

Madras High Court on Manual Scavenging



BOOK MUNICIPAL COMMISSIONERS FOR DEATHS DURING MANUAL SCAVENGING, SAYS MADRAS HIGH COURT

- ❖ The Madras High Court has issued a set of 19 guidelines to the government to effectively deal with the manual scavenging issue.

- ❖ The court also asked the government to eradicate the practice by at least 2026.
- ❖ The guidelines included steps to ensure mechanisation of clearing of sewer, septic tank and stormwater drains.
- ❖ The court suggested registration of FIR against not only the contractors but also the head of the civic body (Commissioners of Corporations, Municipalities and Panchayat Unions) in the case of death of workers as part of deterrent measure.
- ❖ Currently, FIRs were being registered only in cases of deaths and that too “by identifying a convenient scapegoat, typically a lowly employee of a contractor.”
- ❖ It suggested the compensation paid for the family of workers who die in manual scavenging to be increased to `20 lakh from `10 lakh.
- ❖ It is urging the authorities to ensure strict implementation and compliance of the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2023.
- ❖ The compensation for the deaths due to manual scavenging had been increased from ₹10 lakh to ₹30 lakh through a Government Order issued on January 23, 2024.

Impact of GI certified products

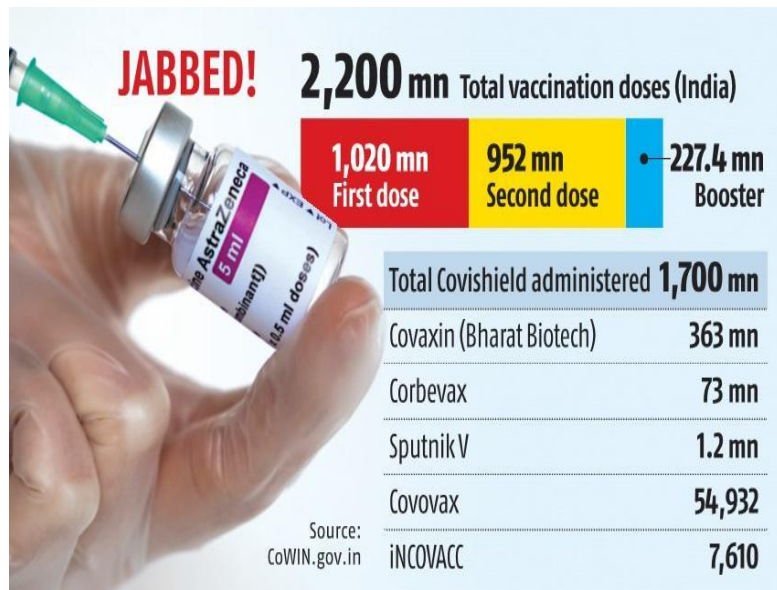


- ❖ The NABARD has sanctioned a study on the impact evaluation of Geographical Indication (GI) products to Symbiosis School of Economics.

- ❖ This particular study will enable NABARD to analyse the benefits accrued to artisans/producers because of the GI tags over the years.
- ❖ As of today, 144 products supported by NABARD, are GI tagged.
- ❖ The first product that received a GI tag with support from NABARD, was Pochampally Ikat from Telangana.

INTERNATIONAL

Covishield Controversy

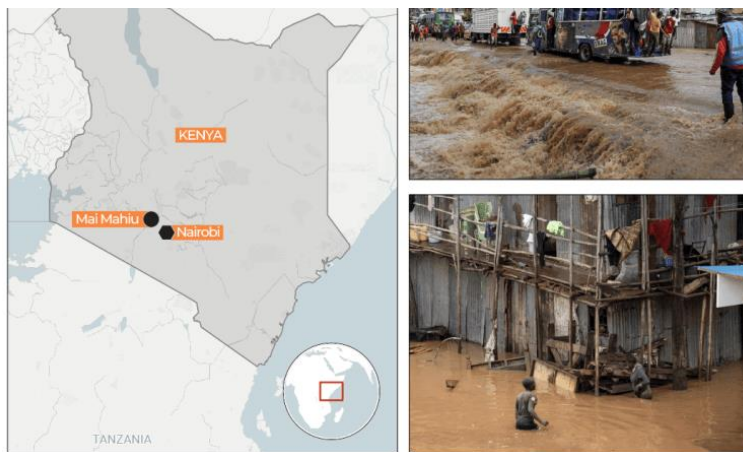


- ❖ Controversy erupted when UK-based pharmaceutical giant AstraZeneca admitted that its Covid vaccine could cause blood clot-related side effects 'in very rare cases'.
- ❖ Its legal document mentioned that, this vaccine could cause Thrombosis with Thrombocytopenia Syndrome (TTS) in “very rare cases”.
- ❖ The very same vaccine was manufactured by the Serum Institute of India (SII) and was known in India as Covishield.
- ❖ TTS is a rare condition characterized by the formation of blood clots (thrombosis) accompanied by low platelet count (thrombocytopenia).

Nakuru dam burst

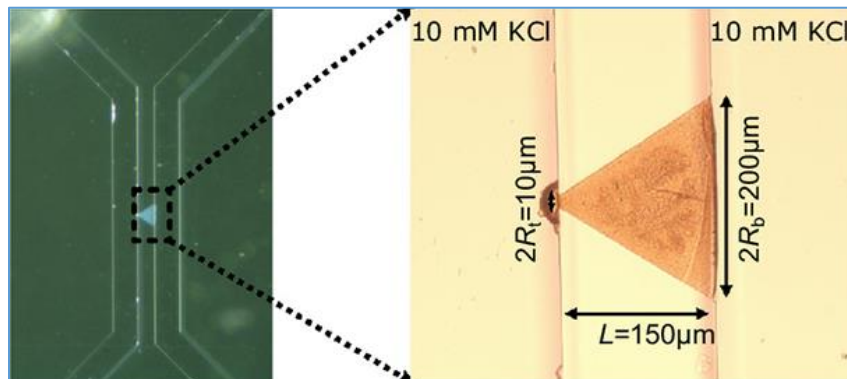
- ❖ The old Kijabe dam was broken near a village in the Rift Valley region of southern Kenya.

- ❖ It is a hillside barrier formed naturally over decades after railway construction work by Kenya's former British colonial rulers.
- ❖ Kenya, along with neighbouring Tanzania and Burundi, has recently been hit hard by floods.
- ❖ The ongoing heavy rainfall in Kenya has deposited debris, stones and soil.
- ❖ This caused the tunnel to become blocked and ultimately burst.
- ❖ Late last year, more than 300 people died in rains and floods in Kenya, Somalia and Ethiopia.
- ❖ As per the UN's World Meteorological Organization, the latest El Nino is one of the five strongest ever recorded.



SCIENCE AND TECHNOLOGY

Artificial Synapse



- ❖ Researchers have created artificial neurological junctions called synapses using a mix of water and salt.

- ❖ This is paving the way for the development of advanced computers that mimic the performance of a human brain.
- ❖ The artificial brain cells use the same water and salt ingredients the brain uses.
- ❖ Human brains use water and dissolved salt particles called ions as their medium.
- ❖ On the other hand, current advanced computer systems rely on conventional solid materials for the same function.

Speech reconstruction technology

- ❖ Researchers at IIT Guwahati developed the "LOQU", a novel method to generate human speech signals directly from vocal cord vibration signals.
- ❖ It can capture vocal fold movement without invasive procedures, utilizing sensors placed over the throat.
- ❖ During speech, vocal folds vibrate due to intrinsic laryngeal muscle movement.
- ❖ In some cases, like mutism from apraxia, individuals may have normal vocal fold vibration without sound production
- ❖ For the above issue, LOQU can be used for the reconstruction of speech signals from vocal cord vibrations.

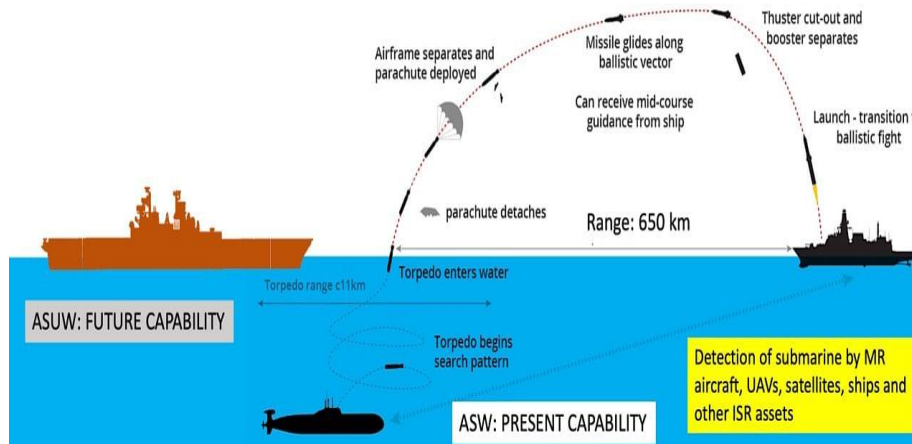


DRDO's SMART system

- ❖ DRDO successfully made flight test of the Supersonic Missile-Assisted Release of Torpedo (SMART) system.

- ❖ SMART is a next-generation missile-based light-weight torpedo delivery system designed and developed by DRDO.
- ❖ It aims to enhance the anti-submarine warfare capability of the Indian Navy far beyond the conventional range of lightweight torpedoes.

Supersonic Missile Assisted Release of Torpedo (SMART) CONOPS



LSAM 20 Barge



- ❖ The sixth barge of the LSAM 16 (Yard 130) series, built by a private firm, was launched in Maharashtra's Thane by Indian Navy.

- ❖ It is named 'Ammunition Cum Torpedo Cum Missile Barge, LSAM 20.
- ❖ LSAM stands for "Landing Ship Ammunition," indicating the barge's role in transporting ammunition for the Indian Navy.

MISCELLANEOUS

90-Million-Year-Old Herbivore Dinosaur



- ❖ Palaeontologists from Argentina announced the discovery of a new medium-sized herbivorous dinosaur.
- ❖ It was a fast runner and lived about 90 million years ago in the Late Cretaceous period in present day Patagonia.
- ❖ The animal, named Chakisaurus nekul, was found in the Pueblo Blanco Natural Reserve.
- ❖ The largest Chakisaurus reached 2.5 or 3 meters long and was 70 centimetres high (8 to 10 feet long and 27 inches high).

World's Deepest Blue Hole

- ❖ Researchers have found the world's deepest blue hole in the Latin American country of Mexico.
- ❖ They have reached 1,380 feet or 420 meters below sea level, but it is not the end of the hole.
- ❖ The "deepest known blue hole", Taam Ja' Blue Hole (TJBH), is located in Chetumal Bay off the Yucatan Peninsula.
- ❖ Its depth can be compared to the height of Trump Tower in Chicago.

