

## **EVERYDAY CURRENT AFFAIRS – DECEMBER 14, 2022**

### **TAMIL NADU**

- **The Tamil Nadu government - has prohibited the sale and use of phosphorus paste (rat poison) or any preparation containing the substance under the Insecticides Act, 1968.**
  - ✓ As per the government order, the sale, stocking, exhibition and use of “six highly toxic pesticides” harmful to human beings and animals have been banned for 60 days.
  - ✓ The six insecticides include monocrotophos, profenophos, acephate, profenophos + cypermethrin, chlorpyrifos+ cypermethrin and chlorpyrifos
  - ✓ They have been prohibited by Tamil Nadu as per provisions under the Insecticides Act 1968 (Central Act 46 of 1968).
  - ✓ The state wing of the National Health Mission indicated that 3% yellow phosphorus was one of the major causes of suicidal deaths across the state.
  - ✓ As per the order, 3% yellow phosphorus, which is being used as an insecticide (rodenticide) is not a registered insecticide, but the “poisonous substance” being sold as insecticide/agricultural use in petty shops and supermarkets.
  - ✓ A high-level committee also recommended imposing a ban on the substance.
  
- **The Tamil Nadu government - has signed a loan agreement with German Development Bank, KfW for Rs.4,250 crore Sustainable Municipal Infrastructure Financing (SMIF).**
  - ✓ The objective of the third phase of SMIF is on environment-related urban infrastructure, especially improving the capacity of urban local bodies in water supply and sewage disposal.
  - ✓ The agreement between the government, the Tamil Nadu Urban Infrastructure Financial Services Limited (TNUIFSL), and the funding agency KfW, and a separate agreement between TNUIFSL and the funding agency, were signed recently on December 2.



- ✓ The loan documents were exchanged in the presence of chief minister M K Stalin on December 13.
- ✓ The duration of the project is up to June 30, 2030.
- ✓ The KfW-Tamil Nadu government has been implementing the SMIF programme since 2008
- ✓ The objective of the programme is to protect the environment, preserve the natural resources and improve the quality of life of the urban population.
- ✓ The programme was implemented at a cost of Rs. 1,970 crore and its second phase ended on December 2.
- ✓ Under the initiative, the municipal administration and water supply department had taken up several programmes
- ✓ This include road improvements, storm water drains, rejuvenation of water bodies, water supply improvements, combined water supply schemes, development of parks and playfields and underground sewerage schemes.
- **Greater Chennai Corporation - will set up 47 'sponge parks', which will store flood water and recharge ground water, thereby solving the issue of inundation of city roads.**

## AT A GLANCE

➤ Parks to be turned into sponge parks   <b>47</b>	<b>FEATURES</b> ➤ A mini pond will be constructed at a depth of 10 ft ➤ Saplings that soak water will be planted ➤ Drainage systems connecting SWDs and road surface run-off will be linked to these ponds
➤ Work order issued   <b>5</b>	
➤ Fund for 5 parks   <b>₹92 lakh</b>	
➤ Murasolimaran Park South at Perambur High Road   <b>₹18 lakh</b>	
➤ Babakulam   <b>₹46 lakh</b>	
➤ I-Block, 38th Street   <b>₹8 lakh</b>	
➤ VGP Selva Ngr 2nd Main Road park   <b>₹12 lakh</b>	
➤ Gangai Street Park   <b>₹8 lakh</b>	

- ✓ Work order for five such parks has been issued and another 42 will be tendered out this month.
- ✓ The project will include construction of mini ponds and trenches at the parks.
- ✓ The trenches will carry water from roads and storm water drains into the ponds.

## STATES

- **On December 13, the Kerala assembly - passed the University Laws (Amendment) Bill, 2022, seeking to remove the governor as chancellor of universities in the state and appoint eminent personalities to the post.**
- ✓ Earlier, on December 7, Kerala Law Minister P Rajeev introduced an amendment in the assembly where the chancellor can be decided by a three-member committee which includes the Chief Minister, the Leader of the Opposition and the Speaker.
- ✓ According to the amendment bill introduced in the assembly, “the government shall appoint an academician of high repute or a person of eminence in any of the field of science including agriculture and veterinary science, technology, medicine, social science, humanities, literature, art, culture, law or public administration as the chancellor of the university.”
- ✓ Even though the bill has been passed, according to the rules, it has to be sent to Governor Arif Mohammed Khan for his assent.
- ✓ The chancellor is appointed for a period of five years and the person appointed as chancellor shall be eligible for reappointment of one or more terms.
- ✓ The chancellor may resign his office by intimation in writing to the government.
- ✓ The bill has been sent for the consideration of the subject committee.
- ✓ It was introduced amid the continuing tussle between governor Arif Mohammed Khan and the government over various issues, including the appointment of university vice-chancellors.
  
- **A five-year-old girl from Raichur district - has become Karnataka's first confirmed Zika virus case.**
- ✓ Zika virus disease is considered to be one of the significant public health diseases of concern post-2016 outbreak in Brazil.
- ✓ Rashes, fever, conjunctivitis, muscle and joint pain, malaise, and headaches are common symptoms of the disease
- ✓ People sick with Zika virus should get plenty of rest, drink enough fluids, and treat pain and fever with paracetamol.
- ✓ The disease spreads through the bite of an infected Aedes mosquito, which is also known to transmit infections like Dengue and Chikungunya.
- ✓ According to the World Health Organisation (WHO), the Aedes mosquitoes usually bite during the day, peaking during early morning and late afternoon or evening.
- ✓ The Zika virus infection can cause microcephaly (a brain disability condition) or other conditions called congenital Zika syndrome.
- ✓ The virus was first identified in Uganda in 1947.
- ✓ There is currently no vaccine available for the disease

- **Kerala Chief Minister Pinarayi Vijayan - inaugurated the fifth edition of Kochi-Muziris Biennale (KMB) at Parade Ground in Fort Kochi on December 12.**



- ✓ The country's largest contemporary art exhibition opened with over 200 major creative projects of 90 artists from over 24 countries being exhibited at 14 venues in Kochi till April 10
- ✓ The amalgam of cosmopolitan art and culture will be held under the theme 'In Our Veins Flow Ink and Fire'
- ✓ It is curated by Singapore-based Indian-origin artist Shubigi Rao.
- ✓ The Students' Biennale, encouraging young talents, and the Art By Children, aimed at reaching out to school students, will run parallel to the main event
- ✓ To conduct the event, the Kerala government has allotted Rs. 7 crore, which was the largest governmental aid given for any cultural programme in India, according to the Kerala CM
- ✓ The KMB was launched in 2012 by Kerala-born, Mumbai-based artists Bose Krishnamachari and Riyas Komu and this year marks the 10th anniversary of the biennial event.
- ✓ The first edition was curated by its founding members, while the subsequent editions were curated by Jitish Kallat, Sudarshan Shetty and Anita Dube
- ✓ The fifth edition was originally scheduled in 2020 and postponed twice due to the Covid pandemic
- ✓ The fourth edition in 2018 saw over six lakh art enthusiasts from across the world, making it as one of the top international art destinations.
- ✓ Art biennials are international-level art exhibitions that take place once in two years at a specific site.
- ✓ They are usually centred around a curatorial theme, unlike art fairs.
- ✓ Venice Biennale is one of the oldest and most prestigious biennales in the world.

## NATIONAL

- **On December 13, Prime Minister Narendra Modi – released a commemorative coin and postal stamp in honour of revolutionary freedom**

**fighter-turned-spiritual guru Sri Aurobindo to commemorate his 150th birth anniversary.**



- ✓ The PM also addressed the gathering in Puducherry through video conferencing
  - ✓ During his address, the PM appealed to the people to prepare themselves by taking inspiration from Sri Aurobindo and to realise the dream of a developed India.
  - ✓ He said the life of Sri Aurobindo is a reflection of 'Ek Bharat, Shreshtha Bharat'.
  - ✓ The prime minister further said Sri Aurobindo was a prominent freedom fighter and a philosopher whose ideals have inspired generations
  - ✓ Union Minister G Kishen Reddy, TN Governor RN Ravi, Puducherry L-G Dr Tamilisai Soundararajan, Chief Minister N Rangasamy, and members of Sri Aurobindo Ashram took part
  - ✓ Sri Aurobindo, born on August 15, 1872, was a visionary who made lasting contributions to India's freedom struggle.
- **The Rajya Sabha - passed the Energy Conservation (Amendment) Bill by a voice vote on December 12**
- ✓ The Bill seeks to amend the Energy Conservation Act, of 2001, which was last amended in 2010 to address various new factors
  - ✓ It promotes energy saving and efficiency, empowering the Centre to define a carbon credit trading programme.
    - ✓ Carbon credit is a tradeable permit that allows the production of specified amount of carbon dioxide and other GHG emissions.
  - ✓ The Bill seeks to mandate the use of non-fossil sources, including biomass and ethanol, for energy and feedstock, along with the use of green hydrogen and green ammonia.
  - ✓ The legislation also stipulates that designated consumers may be required to meet a proportion of their energy needs from non-fossil sources.

- ✓ The bill also proposes to enhance the scope of the Energy Conservation Building Code and bring large residential buildings within the ambit of the energy conservation regime
  - ✓ The Energy Conservation Code for buildings will apply to office and residential buildings with a connected load of 100 kilowatt or above.
- ✓ The bill provides for penalties for violations by industrial units or vessels, and on manufacturers if a vehicle fails to comply with fuel consumption norms.
- ✓ The bill would now require presidential assent before becoming an Act.
- ✓ The Bill was passed by the Lok Sabha in August 2022

## **INTERNATIONAL**

- **New Zealand - became the world's first country to ban smoking for future generations.**
- ✓ The nation has passed new legislation as part of the country's efforts to be smoke-free by 2025.
- ✓ The latest legislation introduced has banned those aged 14 and under from ever being able to legally buy cigarettes
- ✓ The new anti-smoking law include bans on selling tobacco to anyone born on or after January 1, 2009, punishable by fines up to NZ\$150,000 (\$95,910).
- ✓ The legislation will also reduce the amount of nicotine allowed in smoked tobacco products and allowing the selling only through specialty tobacco stores, rather than corner stores and supermarkets.
- ✓ The number of stores legally allowed to sell cigarettes will be reduced to a tenth of their existing levels – from 6,000 to just 600 nationwide.
- ✓ The new laws will come into force in 2023
- ✓ Only Bhutan, which banned cigarette sales in 2010, will have stricter anti-smoking laws.

## **SCIENCE, TECHNOLOGY & ENVIRONMENT**

- **For the first time, researchers at the Lawrence Livermore National Laboratory (LLNL) in California - produced more energy in a fusion reaction than the energy used to ignite it**
- ✓ This phenomenon called 'net energy gain' was achieved in the search for a source of cleaner and unlimited energy which would also end reliance on fossil fuels.
- ✓ This 'major scientific breakthrough' was announced by US Energy Secretary Jennifer Granholm on December 13
- ✓ Net energy gain was difficult to achieve because fusion happens at such high temperatures and pressures that it is incredibly unable to control.
- ✓ Fission and fusion are two different types of nuclear reactions that produce energy.

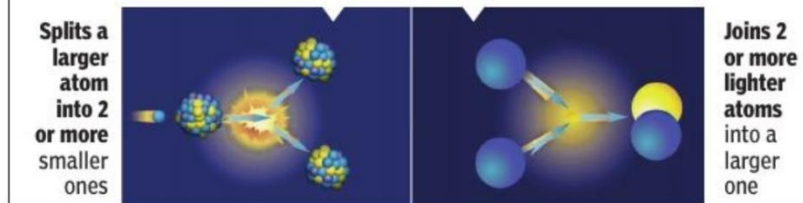
- ✓ Both fission and fusion use the binding energy of protons and neutrons in the nuclei of atoms to release an enormous amount of energy.

## THE LAWRENCE LIVERMORE LAB EXPERIMENT



In the latest US experiment at Lawrence Livermore National Laboratory (left), lasers were used to bombard hydrogen isotopes held in a superheated plasma state to fuse them into helium, releasing a neutron and carbon-free energy in the process. The fusion facility is the size of three football fields and uses about 200 lasers.

### Fission vs Fusion



- ✓ The main difference between them is that fission is the splitting of a heavy and unstable nucleus into two smaller nuclei while fusion involves joining two light nuclei together.
- ✓ Fusion is advantageous over fission because it can yield several times more energy without producing highly radioactive byproducts.
- ✓ Nuclear fusion is brought about by fusing two hydrogen atoms to create helium, releasing a large amount of energy in the process, similar to how the sun generates heat and light.
- ✓ Scientists at LLNL used 2.1 megajoules of energy to create the conditions for the reaction, generating 2.5 megajoules.
- ✓ This has demonstrated that fusion can release more energy than it consumes

