

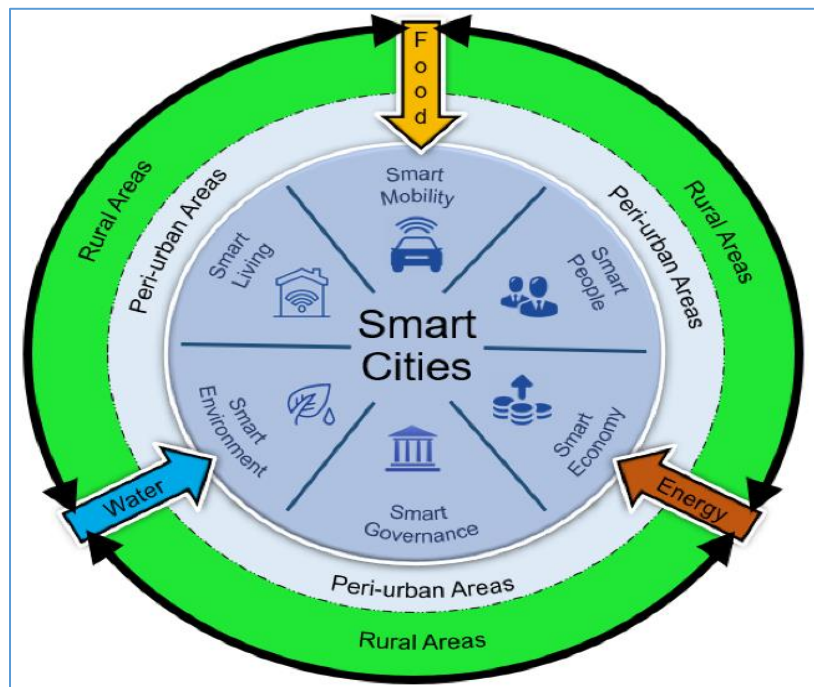
October - 22

## TNPSC BITS

- ❖ SP Singh's 'Jhaadu Daan' (broom donation) initiative is securing a place in the prestigious India Book of Records by distributing over 1 lakh brooms across 80 different locations.
- ❖ The Third G20 Finance Ministers and Central Bank Governors (FMCBG) meeting under the Indian Presidency was held in Gandhinagar, Gujarat.
- ❖ The Ministry of Electronics and Information Technology (MeitY) has released a draft "National Strategy for Robotics" (NSR).
  - It aims to strengthening the innovation cycle of robotic technology and fostering India's leadership in robotics by 2030.

## NATIONAL

### Smart Cities Mission, India: Localizing Sustainable Development Goals



- ❖ The report was prepared jointly by the Union Housing and Urban Affairs Ministry and UN-Habitat.
- ❖ This is the first comprehensive effort to map national mission projects against global sustainability objectives.

- ❖ Over 70% of projects under the Smart Cities Mission (SCM) are in alignment with the UN's Sustainable Development Goals (SDGs) on cities, clean water and sanitation, clean energy and economic growth.
- ❖ The SCM involves around 8,000 projects.
- ❖ SCM projects have largely contributed, in one way or the other, to 15 of the 17 SDGs.
- ❖ Among these, nearly 44% were in line with the aim of SDG 11 — to make cities and human settlements inclusive, safe, resilient and sustainable.
- ❖ Around 3.3% of the SCM projects contributed to SDG 6 (Clean water and sanitation).
- ❖ 8.6% to SDG 7 (Affordable and clean energy) and 6.4% to SDG 8 (Decent work and economic growth).

### **Pharmacopoeial Discussion Group**



- ❖ The Indian Pharmacopoeia Commission (IPC) has joined the Pharmacopoeial Discussion Group (PDG).
- ❖ IPC was the only Pharmacopoeia body in the world to be selected for the pilot phase initiated in September 2022.
- ❖ The PDG was established in 1989 by the European, Japanese and the US Pharmacopoeia.

- ❖ PDG aims to harmonize global Pharmacopoeial standards to reduce the burden on manufacturers and ensure consistent quality.
- ❖ In 2001, the World Health Organization (WHO) joined as an observer.

## INTERNATIONAL

### Elimination of lymphatic filariasis



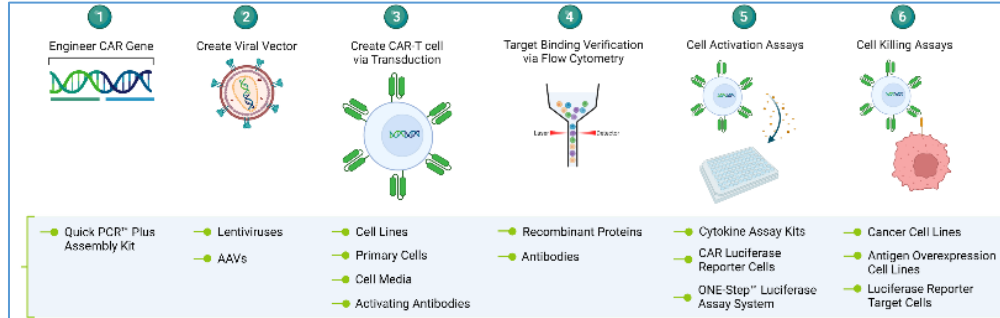
- ❖ Lao People's Democratic Republic has eliminated lymphatic filariasis (LF).
- ❖ It is a disease that cripples and has significant social and economic impact on the affected communities.
- ❖ This is the country's second neglected tropical disease (NTD) to be eliminated in six years, following the elimination of trachoma.
- ❖ Lao PDR is now the second country after Bangladesh to eliminate lymphatic filariasis (LF) in 2023.
- ❖ Nineteen countries have been able to eliminate lymphatic filariasis (LF).

## SCIENCE AND TECHNOLOGY

### NexCAR 19

- ❖ ImmunoACT, an IIT-Bombay incubated startup, had developed a CAR-T Cell Therapy drug named NexCAR 19 for cancer therapy.

- ❖ CAR-T Cell Therapy is an innovative form of cancer treatment that involves genetically modifying a patient's T cells to fight cancer cells.
- ❖ NexCAR 19 is intended for the treatment of lymphomas and leukaemia, which are types of blood cancers.



## New evolutionary law

### SCIENTISTS SAY CHARLES DARWIN'S EVOLUTIONARY LAW GOES BEYOND LIVING BEINGS

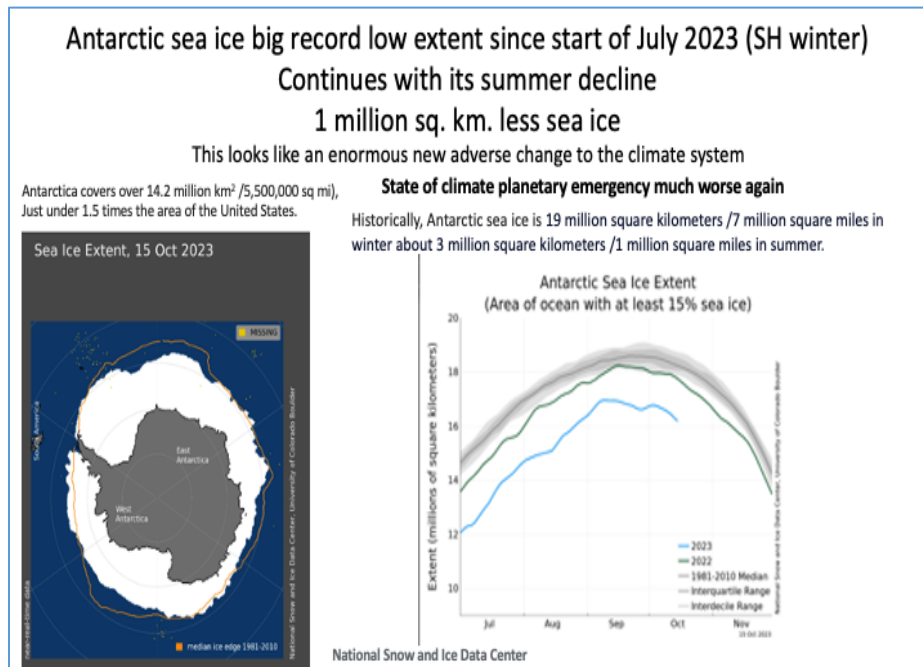
A new paper by scientists says that evolutionary laws are not only for the living beings, but also influence atoms, minerals and planets.

- ❖ Scientists have proposed a new evolutionary law that can explain the evolution of living and non-living entities, from minerals to stars.
- ❖ As life evolved from single-celled to multi-celled organisms, Earth's minerals, for example, became more complex, creating diversity.
- ❖ This, in turn, drove biological evolution.
- ❖ Biodiversity leads to mineral diversity and vice-versa.
- ❖ The two systems, biological and mineral, interacted to create life as we know it today.

- ❖ Evolution occurs when a new configuration or a new arrangement of atoms and molecules works well and functions improve.
- ❖ Darwin defined function as primarily with survival.
- ❖ But the new study highlights at least three kinds of functions that occur in nature.
- ❖ The first function is stability, which means systems made up of stable arrangements of atoms or molecules will continue to survive.
- ❖ The second one includes dynamic systems with energy supply.
- ❖ The third is “novelty” — the tendency of evolving systems to explore new configurations or arrangements that can give rise to new behaviours or characteristics.

## ENVIRONMENT

### Antarctic Sea Ice Decline



- ❖ Antarctic sea ice likely reached its annual maximum extent of 16.96 million square kilometers (6.55 million square miles).
- ❖ This is the lowest sea ice maximum in the 1979 to 2023 sea ice record by a wide margin.
- ❖ This year’s maximum is 1.03 million square kilometers (398,000 square miles) below the previous record low set in 1986.



- ❖ It is also 1.75 million square kilometers below (676,000 square miles) below the 1981 to 2010 average Antarctic maximum extent.
- ❖ The missing sea ice amounted to approximately 386,000 square miles below the previous record low recorded in 2022 – a region larger than Egypt.

## REPORTS AND INDICES

### 2023 Global Survey on Persons with Disabilities and Disasters

- ❖ The UN Office for Disaster Risk Reduction (UNDRR) conducted the 2023 Global Survey, following up on the 2013 survey.
- ❖ 16 per cent of the world's people have some form of disability and are killed by disasters two-four times more often than the rest of the population.
- ❖ 84 per cent of the respondents not aware of evacuation routes, shelter homes or that they should have a package of emergency supplies.
- ❖ Only 11 per cent of respondents being aware of a disaster management plan in their local area.
- ❖ The world projected to face some 560 disasters every year by 2030.



### Report on Urban Transportation

- ❖ The report titled 'The Fast, the Slow and the Congested: Urban Transportation in Rich and Poor Countries' was released recently.
- ❖ It took into account the average travel speed for motor vehicles across cities.

- ❖ Flint (US) came up with the highest average speed throughout the day.
- ❖ Dhaka, the capital city of Bangladesh, had the slowest average travel speed.
- ❖ Bogota (Colombia) was found to be the most congested city.
- ❖ The report highlights that nine out of the ten cities with the slowest uncongested travel speeds are situated in Bangladesh, India, and Nigeria.
- ❖ Bhiwandi from Maharashtra secured the 5th position in the list of the World's 20 slowest cities based on the speed index.
- ❖ Kolkata closely followed at the 6th position, with Arrah in Bihar at the 7th spot.
- ❖ In traffic congestion metrics, Bengaluru held the 8th spot, Mumbai ranked 13th and Delhi 20th.



## MISCELLANEOUS

### **Ancient Pollen Analysis**

- ❖ Pollen grains analysis helps understand how the first humans migrated from Africa across Europe and Asia.
- ❖ The pollen data showed that warming temperatures supported forests that expanded into Siberia and facilitated early human migration there.
- ❖ They compared Pleistocene vegetation communities around Lake Baikal in Siberia, Russia, to the oldest archaeological traces of Homo sapiens in the region.

- ❖ Pleistocene period is considered two million to 11 thousand years ago and as the time of human evolution.
- ❖ The study focuses on a migration event that occurred approximately 45,000-50,000 years ago.

