

# NEWS TODAY

## WHO launches its first Investment Round to finance its Health for All mandate

Investment Round has been launched at the 77<sup>th</sup> World Health Assembly (WHA).

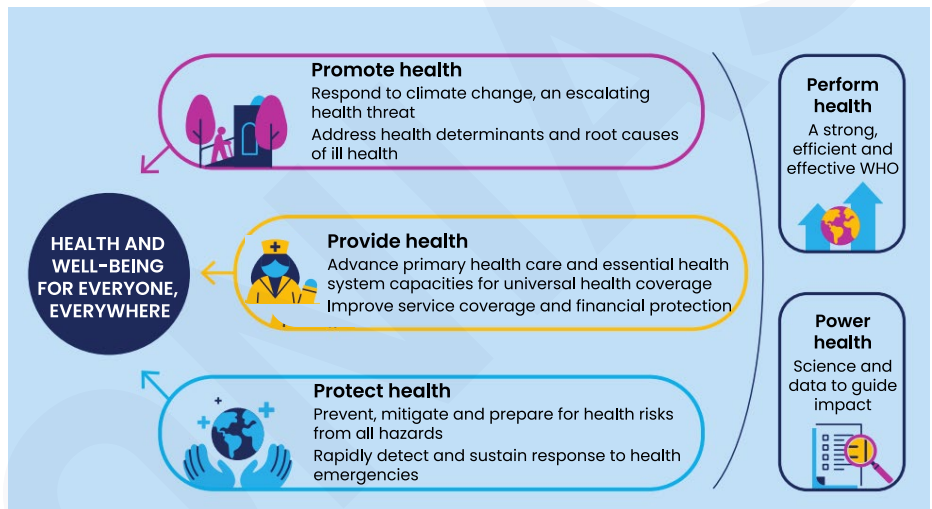
- **WHA** is a decision-making body of **World Health Organisation (WHO)**. The theme of the Assembly is **All for Health, Health for All**.
- **Health for all** as a concept was evolved in the **Alma-Ata Declaration (1978)** of WHO to promote **Primary Health Care**. The Investment Round aims to mobilize resources for **WHO's core work for the next 4 years (2025-2028)** (refer image).
- Under it, **\$ 7 Bn** will be **mobilized** to support the countries so that they can respond to health challenges.

### Funding of WHO

➤ WHO receives funding from **two main sources-**

- ⊕ **Assessed contributions:** Due that **countries pay** to be a member of the Organization.
  - ◆ These are a **percentage of a country's GDP** as agreed by the UN General Assembly and **approved every two years**.
- ⊕ **Voluntary contributions:** Comes from **Members or from other partners**. Major source of **total funding**.
  - ◆ It is **further categorized** into Core voluntary contributions, Specified voluntary contributions etc.

**Challenges in funding of WHO:** Assessed contributions cover **less than 20% of the total budget**, Withdrawal of funding (E.g. Temporary suspension of funding by US) etc.



## India's first Quantum Diamond Microchip Imager to be developed

It will be developed by Tata Consultancy Services (TCS) in partnership with IIT-Bombay.

- This Project aligns with India's **National Quantum Mission (NQM)**, launched in 2023 and implemented by the **Department of Science & Technology (DST)**.
- **NQM** aims to position the nation as a global **Quantum Technology (QT)** leader.
  - ⊕ QT is a class of technology that works by using the principles of **quantum mechanics** (the physics of sub-atomic particles).

### About Quantum Diamond Microchip Imager

- An **advanced sensing tool** for semiconductor chip imaging.
- Uses the **defects** in a diamond's structure, known as Nitrogen-Vacancy (NV) centers, for detecting anomalies in semiconductor chips.
  - ⊕ Reduces **chip failures** and improve the **energy efficiency** of **electronic devices**.
  - ⊕ Also, it will promote development of the semiconductor industry in country.

**Microchip Imager** will facilitate **Second quantum revolution**.

- The **Second Quantum Revolution** refers to a **contemporary wave of advancements** and breakthroughs in the field of QT (for e.g. quantum computing).
  - ⊕ Successor of the **first quantum revolution** (in early 20th century).
- In **first quantum revolution**, discovery of **quantum mechanics** and its **properties** has been done. It enabled inventions such as the laser, transistor etc.

### About Semiconductor Chips

- An essential component of all modern **electronic devices**.
- Act as the **brain of devices** across industries such as communications, computing, healthcare, military systems etc.
- Made from pure elements, typically **silicon or germanium**, or compounds such as **gallium arsenide**.

## Djibouti releases Genetically Modified (GM) Mosquitoes to fight Malaria

The release is part of the 'Djibouti Friendly Mosquito Programme' to stop the spread of *Anopheles stephensi*.

- *Anopheles stephensi* is a mosquito species that is capable of transmitting both *Plasmodium falciparum* and *P. vivax malaria parasites*.
- Only female mosquitoes bite and transmit malaria and other viral diseases.

Under the project, **friendly non-biting male** *Anopheles stephensi* mosquitoes have been developed and they carry **self-limiting genes** that kills **female offspring** before they reach maturity.

- By reducing the female mosquito population, spread of the disease can be controlled.

### Technology involved in creating GM Mosquitoes

- **Laboratory Method:** GM mosquitoes are mass-produced in a laboratory to **carry two types of genes:**

- ⊕ A **self-limiting gene** that prevents female **mosquito offspring** from **surviving to adulthood**.

- ◆ Similar technology has been successfully used in India.

- ⊕ A **fluorescent marker gene** that glows under a special red light.

- **Gene Drives Technology (GDT):** A type of **genetic engineering technique** that **modifies genes** so that they don't follow the typical rules of heredity.

- ⊕ It increases the likelihood that a particular suite of genes will be passed onto the next generation, allowing the genes to **rapidly spread through a population** and **override natural selection**.

### Key components of GDT

- Gene to be spread
- **Cas9 enzyme** that can cut DNA (acts as a molecular scissor)
- **Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR)**, a programmable DNA sequence that identifies where the enzyme should cut.

## Landslides caused loss of life in Mizoram in the aftermath of cyclone 'Remal'

Cyclone rain-triggered landslides in the Northeast spotlights need for building resilience to multi-hazard disasters.

### About Landslides

- It is defined as the **movement of a mass of rock, debris, or earth down a slope under the direct influence of gravity**.
- Landslides are generally classified by **type of movement** (slides, flows, spreads, topples, or falls) and **type of material** (rock, debris, or earth).

### Causes

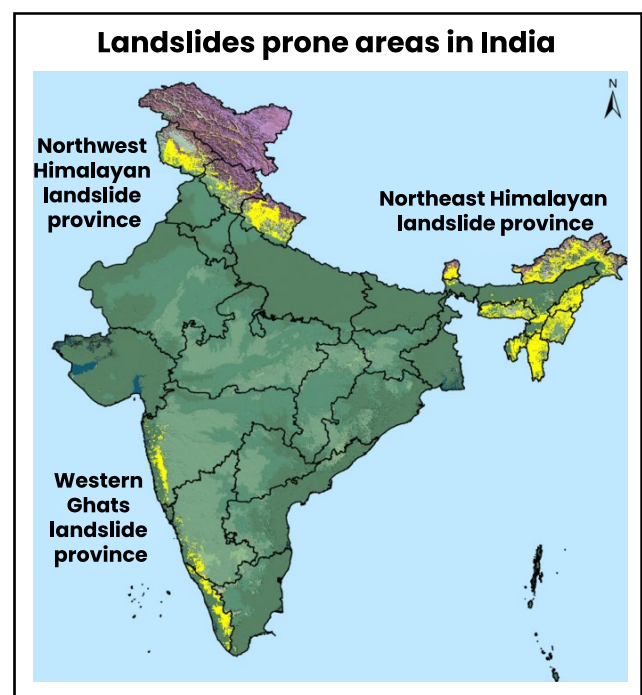
- **Natural:** Rainfall, snowmelt, changes in water level, stream erosion, earthquakes, volcanic activity, etc.
- **Human activity:** Agriculture, construction, deforestation, irrigation, encroachment in vulnerable terrain, etc.

### Landslides prone areas in India

- **The Northwest Himalayas contribute- 66.5%** of landslides in India, followed by the **Northeast Himalayas -18.8%** and the **Western Ghats -14.7%**.
- **Western Ghats:** **Laterite exposed** along plateau edges, growth of roots along the opening of fractures, etc. are some of the significant causes of landslides in the region.

### Initiatives taken for Landslides reduction

- **National Landslide Risk Management Strategy (2019):** comprises hazard mapping, monitoring and early warning system etc.
- **National Landslide Susceptibility Mapping (NLSM) Programme:** for landslide prone areas in the country.
- **Landslide Risk Mitigation Scheme (LRMS):** to provide financial support for site specific Landslide Mitigation Projects.



## FSSAI issued advisory on unauthorised commercialisation of human milk and its products

Food Safety and Standards Authority of India (FSSAI) restated that **the commercialization of human milk and its products is not permitted** under the **Food Safety and Standards Act, 2006**.

- It also directed state licensing authorities to refrain from granting licences for the same.

**Human milk:** It contains many of distinct bioactive molecules that protect against infection and inflammation and contribute to immune maturation, organ development, and healthy microbial colonization.

- Providing safe **donor human milk to newborn is an old tradition** and has been practiced across the world over last 100 years.
- As per the **national guidelines on Lactation Management Centre (LMC)** in Public Health Facilities
  - Breast milk donation should be **voluntary**
  - Donation is to be **done only at health facility** and not promoted in community settings

### Issues with commercialising human milk

- Exploitation of low-income women:** Selling breastmilk risks marginalised women and children's health, catering to high-income consumers
- Quality and Safety:** The risks posed by transmission of pathogens and chemical residues.
- Commodification of human milk:** The high cost of human milk can limit access based on socioeconomic status.

## SEBI amends Infrastructure Investment Trusts (InvITs) regulations 2024

The new norms **allow for the issuance of subordinate units** by privately placed InvITs only to the sponsors on acquisition of an infrastructure project.

- The move **aims to bridge the difference in valuation** done by the sponsor (as a seller) for an asset and that by the InvIT (as a buyer).

### About InvITs

- A type of investment vehicle** similar to a mutual fund that **allows investors to invest in infrastructure projects** like toll roads, power lines and pipelines etc.
- The **sponsors (infra companies) set up the InvITs** through **SEBI** and are recognised as borrowers under the **SARFAESI act 2002**.
  - Parties to an InvIT include its **trustee, sponsor, investment manager and project manager**.
- InvITs **earn income through tolls, rents, interest or dividends** from their investments, which in turn is **distributed to the investors** as their taxable earnings.

### significance of InvITs

- Low ticket size:** The investor can invest small amounts
- Liquidity:** Listed on stock exchanges and can be exited at any point
- Transparency:** investors are informed about where their money is invested
- Low Risk:** as the trusts are regulated by SEBI

**Challenges of investing in InvITs** include operational risk, refinancing risk, return risk etc.

## Also in News



### Certificates of Deposit (CD)

Banks fundraising through CDs rises amid liquidity deficit

#### About CDs

- A **negotiable money market instrument**.
- Issued in dematerialised form** or **Promissory Note** against funds deposited.
- Issued by **Scheduled Commercial banks including Regional Rural banks** and Small finance banks. Also, by certain **All India Financial Institutions (FIs)**.
- Can be issued to individuals, corporations, companies, etc.
- Issued in minimum denomination of **₹5 lakh**
- Issued for a **duration of not less than 7 days and up to 1 year**.
  - FIs can issue CD for **not less than 1 year and not more than 3 years**.



### PRAGATI-2024

**Central Council for Research in Ayurvedic Sciences (CCRAS)** has launched **Pharma Research in AyurGyan And Techno Innovation (PRAGATI-2024)**.

#### About PRAGATI-2024:

- Offers opportunity for **collaborative research** between CCRAS and the industry in the field of **Ayurveda**.
  - Ayurveda is India's traditional system of medicine.
- Also, it will showcase the vast potential of the Ayurveda and herbal industry.

#### About CCRAS

- CCRAS is an autonomous body** under the **Union Ministry of Ayush**
- Apex body** for the formulation, coordination, development and promotion of research on scientific lines in Ayurveda and Sowa-Rigpa system of medicine.



### Asia-Pacific Employment and Social Outlook 2024 report

The **International Labour Organisation (ILO)** has released the report for the Asia-Pacific region.

#### Key Highlights

- The **Employment to Population Ratio (EPR)** improved in the region to 58.2% (2023) from 57.4% (2022) mainly due to **growth of employment among Indian women**.
- In India, the **old age dependency ratio is projected to increase from 0.10 to 0.22 by 2050**.
- **Major acceleration of productivity growth is needed in India to achieve high income status by 2050**.
- Around **76% of manufacturers in India reported skilled labour shortages**.



### Oedocladium sahyadricum

This new algal species was discovered in Western Ghats of Kerala.

#### About Oedocladium sahyadricum

- ⊕ It is algal species which is **dioecious** (having the male and female organs in separate and distinct individuals) and **terrestrial** in nature.
- ⊕ The alga was found like **filmy mat of elongated strands** on wet soil.
- ⊕ It exists in **habitat of loamy, acidic** in nature.
- ⊕ **Applications:** in medicine, agriculture and in the production of a natural pigment.



### Magellan Mission

A fresh look at 30-year-old radar images captured by the Magellan spacecraft suggests the planet Venus may currently be volcanically active.

#### About Magellan Mission

- ⊕ Launched by **NASA** in **1989**.
- ⊕ It was the **first spacecraft to image** the entire surface of **Venus**.
- ⊕ It was designed to use a **Synthetic Aperture Radar (SAR)** to map the Venusian surface.
  - ◆ **SAR** is a technique for producing **fine-resolution images** from a resolution-limited radar system.
- ⊕ The Venusian terrain images **reveal signs of volcanism, tectonic activity, and turbulent surface winds** among other features.



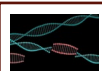
### Nidoviruses

Researchers discovered unknown nidoviruses in various vertebrates.

#### About Nidoviruses

- **Positive-sense Ribonucleic acid (RNA) viruses** that infect a broad range of animals including terrestrial and marine mammals, fish, etc.
- Share a similar **genome organization** and **expression strategy** but vary in the size of genomic RNA.
- Belongs to order **Nidovirales**.
- Out of the large group of nidoviruses, only coronaviruses have been so far associated with disease in humans.

The researchers also found that when **host animals are infected with different viruses** at the same time, a **new virus** may emerge altogether as a result of a **recombination of viral genes**.



### Jumping Genes

**New plant species (Stellaria mcclintockiae)** from Kerala has been named after **Barbara McClintock** who won the Nobel Prize for her discovery of **Jumping Genes**.

#### About Jumping genes

- **Jumping genes, aka transposable elements**, are DNA sequences that can move or "jump" from one location to another within the genome, causing nearby genes to become active or inactive.
- They can **replicate themselves and insert copies at new locations**.
- Their movement can **cause genetic mutations and contribute to genome evolution**.



### Golden rice

Philippines recently revoked biosafety permits for commercial propagation of genetically modified golden rice.

#### About Golden Rice

- Golden Rice is designed to handle a **specific nutrition issue, without any additional cost or difference in taste**.
- Golden rice contain higher levels of the **micronutrients iron and zinc** in the grains while also producing **beta-carotene**, a precursor to vitamin A.
  - ⊕ Beta carotene gives yellow or golden colour.

## Places in News



### Spain (Capital: Madrid)

Spain has pledged to provide military support to Ukraine worth one billion euros this year.

#### Political Boundaries

- Located in **South-Western part of Europe**
- **Land Boundaries:** Portugal (West), Andorra and France (North-East), Gibraltar- British Overseas territory and Morocco (South)
- **Maritime Boundaries:** Mediterranean Sea (east and southeast), Atlantic Ocean (northwest and southwest), Bay of Biscay, an inlet of the Atlantic Ocean (north)

#### Geographical features

- **Highest Peak:** Teide Peak
- **Major Rivers:** Tagus, Ebro etc.
- **Climate:** Temperate with clear hot summers in the interior and moderate and cloudy along the



**Errata:** In News Today dated 4th May, 2024, in article Sri Madhava Perumal Temple, it was wrongly given that the temple is dedicated to Thondreeshwaramudiayar (Lord shiva). The correct information is that the inscription found in the temple, revealed a village, named Thuravalur, with a temple for Thondreeshwaramudiayar (Lord Shiva).

