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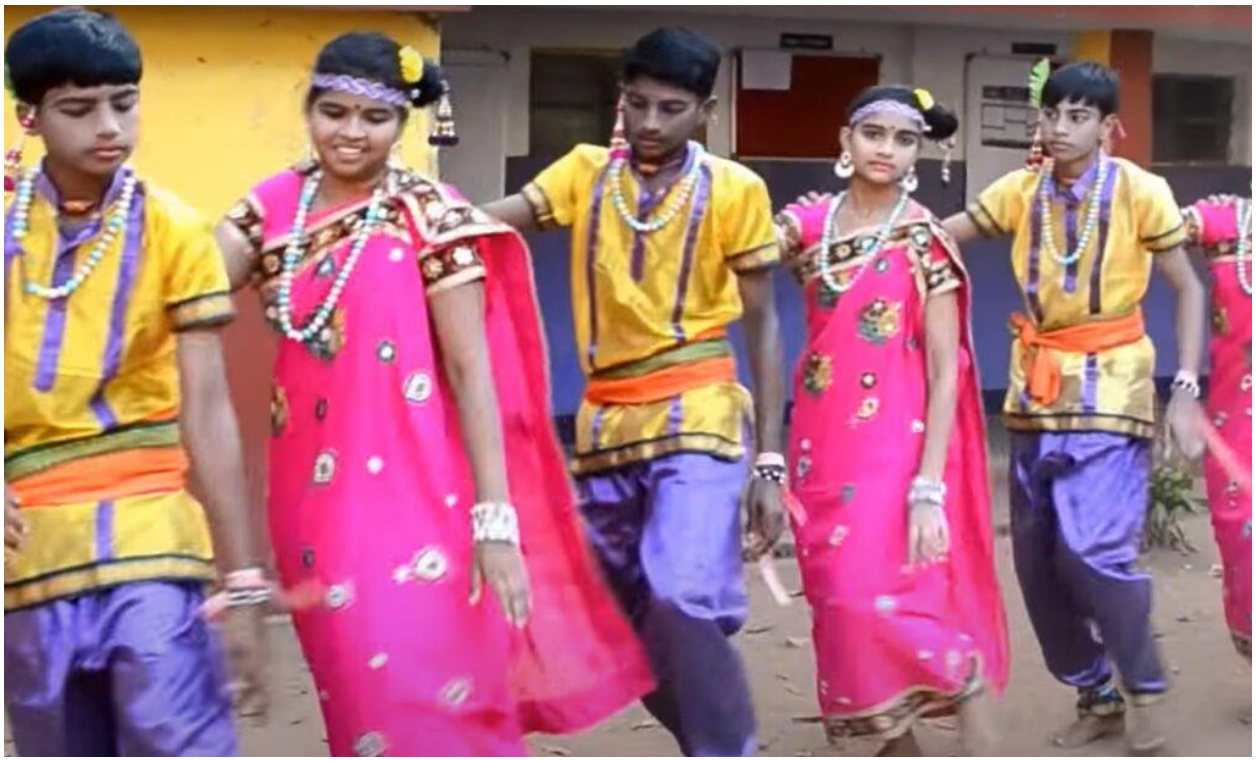
Dhimsa Dance

Syllabus: GS-1; Art & Culture

Context

In a significant development, tribal families from **Neelabandha**, a hilltop hamlet in **Anakapalli district of Andhra Pradesh**, recently received electricity for the first time since India's independence. Overjoyed by this milestone, the community celebrated by performing the traditional **Dhimsa dance**, showcasing their cultural heritage and excitement.



About Dhimsa Dance:

- **Dhimsa** is a vibrant and traditional tribal dance form performed by various tribes in Andhra Pradesh, including the **Bagata, Valmiki, Poraja, Khond, Gadaba, Kondadora, Mukadora, and Kotia** communities.
- It holds a special place in their cultural and social life.

Key Features of Dhimsa Dance:

1. **Occasions**:

- Performed during festivals, weddings, and the annual **"hunting festival"** in April.
- Men and women dance together for hours, celebrating their traditions and unity.

2. **Varieties**:
   - There are **12 varieties** of Dhimsa, each with its unique style and significance.
   - The dance form is believed to have originated in the **Koraput area**, home to the **Ghond tribe**.
3. **Music and Instruments**:
   - Accompanied by traditional **wind and percussion instruments**.
   - Instruments like **dappu, tudumu, mori, kidgi, gilka, and jodukommulu** are used to create rhythmic beats.
4. **Performance Style**:
   - Dancers form **circles**, holding each other's arms and moving in sync.
   - The dance primarily involves coordinated movements of **hands and legs**, with small or large groups performing together.
5. **Themes**:
   - The dance reflects various aspects of tribal life, including **mythologies, folktales, kinship, marital life, and economic activities**.

Significance:

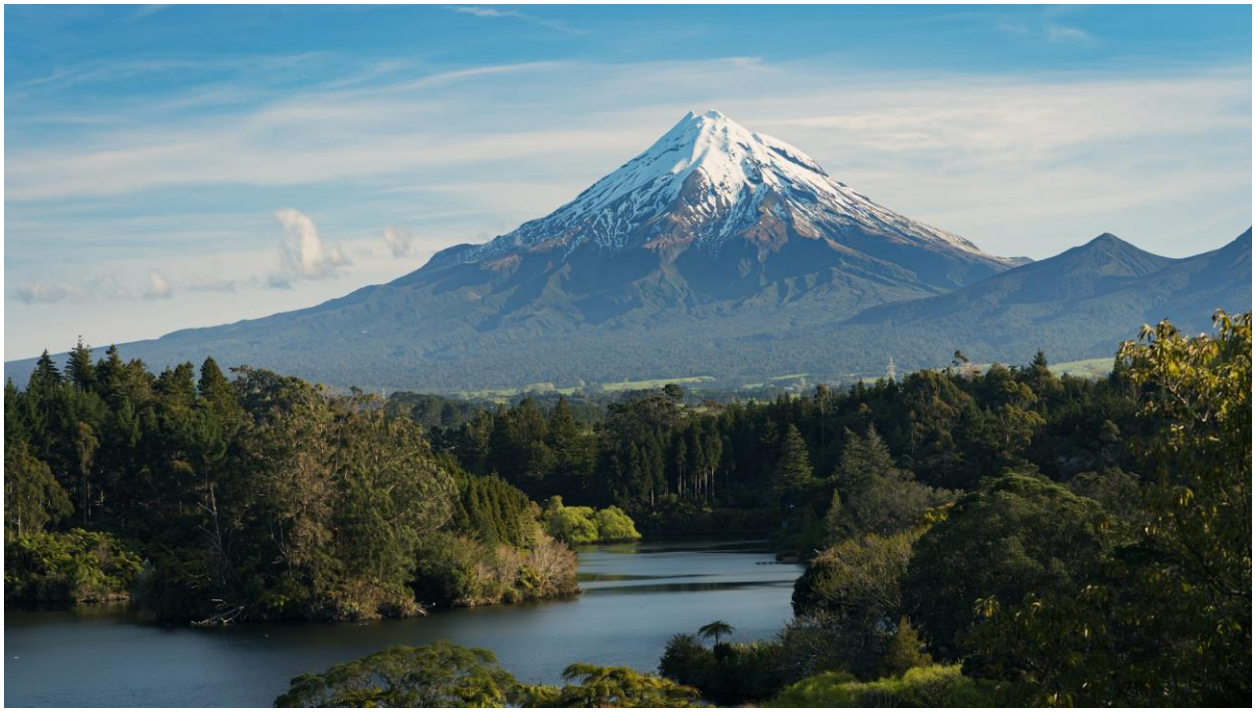
- The Dhimsa dance is not just a form of entertainment but also a medium to preserve and pass on the rich cultural heritage of the tribal communities in Andhra Pradesh.
- The recent celebration in Neelabandha highlights how modernization and development can coexist with traditional practices, bringing joy and pride to the tribal population.

About Mount Taranaki

Syllabus: GS-1; Geography

Context

- Mount Taranaki has become the third natural feature in New Zealand to be bestowed with an individual status, after Te Urewera National Park and Whanganui River.



About

- Mount Taranaki, also known as **Mount Egmont**, is a prominent stratovolcano located in **Egmont National Park** on New Zealand's North Island.

Geological Features

- **Stratovolcano Formation**: It is a composite cone composed of alternating layers of ash and lava flow.
- **Symmetry**: Considered one of the most symmetrical volcanic cones in the world.
- **Ring Plain**: Surrounding the mountain is a circular ring plain formed by volcanic material, lahars, and landslides.
- **Tectonic Origin**: Formed due to the **subduction of the Pacific Plate beneath the Australian Plate**. The magma source is likely deeper than that of the Taupo Volcanic Zone volcanoes due to the greater depth of the subducting slab.

Significance & Recognition

- **Elevation**: Standing at **8,261 feet**, it is the second-highest mountain on North Island.
- **Dormant Status**: A snow-capped volcano that has remained dormant for centuries.
- **Legal & Cultural Importance**:
  - **Natural Status**: Mount Taranaki is the **third natural feature in New Zealand to receive individual legal recognition**, following Te Urewera National Park and Whanganui River.
  - **Maori Heritage**: Indigenous **Maori communities regard Taranaki Maunga as a sacred ancestor**, reflecting its deep cultural and spiritual significance.

GREAT Scheme

Syllabus: GS-2; Government policies and Interventions

Context

- The central government has recently approved **04 start-ups** for grants under the **Grant for Research & Entrepreneurship across Aspiring Innovators in Technical Textiles (GREAT)** scheme.
- This initiative aims to boost innovation and entrepreneurship in the field of technical textiles in India.

About GREAT Scheme

- **Launch**: August 2023
- **Objective**: To develop the **start-up ecosystem** in the technical textiles sector in India.
- **Evolution**: The scheme is part of the **Research, Development, and Innovation (RDI)** component of the **National Technical Textiles Mission (NTTM)**.
- **Focus**: Encouraging young innovators, scientists, technologists, and start-ups to translate their ideas into **commercial technologies/products** and make India **self-reliant** in technical textiles.
- **Support**: Provides funding to individual entrepreneurs or start-ups for developing **functional prototypes** or **commercializing technologies** in technical textiles.
- **Application Areas**: Supports innovations across all segments of technical textiles, including:

- Agro-textiles
- Building-textiles
- Cloth-textiles
- Geotextiles
- Home-textiles
- Industrial-textiles
- Medical-textiles
- Mobile-textiles
- Oeko-textiles
- Packaging-textiles
- Protective-textiles
- Sports-textiles

- **Funding**: Grants of up to **₹50 lakh** for a period of **18 months**.

Key Facts About the National Technical Textiles Mission (NTTM)

- **Objective**: To increase the **penetration level** of technical textiles in India and leverage the sector's **extraordinary growth rate**.
- **Vision**: To position India as a **global leader** in technical textiles.

Components of NTTM:

- **Research, Innovation, and Development**: Focus on R&D to drive innovation in technical textiles.
- **Promotion and Market Development**: Promote the adoption of technical textiles in domestic and international markets.
- **Export Promotion**: Enhance India's exports in the technical textiles sector.
- **Education, Training, Skill Development**: Build a skilled workforce to support the growth of the sector.
- **Nodal Ministry**: **Ministry of Textiles**, Government of India.

Significance of the GREAT Scheme

- **Empowering Innovators**: Provides financial and technical support to young entrepreneurs and innovators in the technical textiles sector.

- **Boosting Self-Reliance**: Aims to reduce dependency on imports and promote indigenous development of technical textiles.
- **Diverse Applications**: Encourages innovations across multiple sectors, including agriculture, healthcare, construction, and sports.
- **Global Leadership**: Aligns with India's goal to become a global leader in technical textiles by fostering innovation and entrepreneurship.

Brucellosis Disease

Syllabus: GS-3; Science & Technology

Context

- An eight-year-old girl from Kottakkal in Malappuram district, Kerala, tragically passed away after undergoing nearly two months of treatment for brucellosis.

What is Brucellosis?

- Brucellosis is a bacterial disease caused by various *Brucella* species, primarily affecting cattle, swine, goats, sheep, and dogs.

How Does it Spread?

- Humans can contract the disease through:
  - **Direct contact** with infected animals.
  - **Consumption** of contaminated animal products (especially unpasteurized milk or cheese from infected goats or sheep).
  - **Inhalation** of airborne agents.
- **Human-to-human transmission is extremely rare**, according to the WHO.

Symptoms of Brucellosis

- Common symptoms include fever, weakness, weight loss, and general discomfort.
- In some cases, symptoms are mild and may go undiagnosed.
- The incubation period typically lasts **two to four weeks** but can vary from one week to two months.

Who is at Risk?

Brucellosis can affect people of all ages, but those at higher risk include:

- **Farmers, butchers, and hunters** who handle infected animals.
- **Veterinarians and laboratory personnel** who come into contact with blood, placenta, fetuses, or uterine secretions of infected animals.

Treatment

Brucellosis is usually treated with **antibiotics**.

Prevention

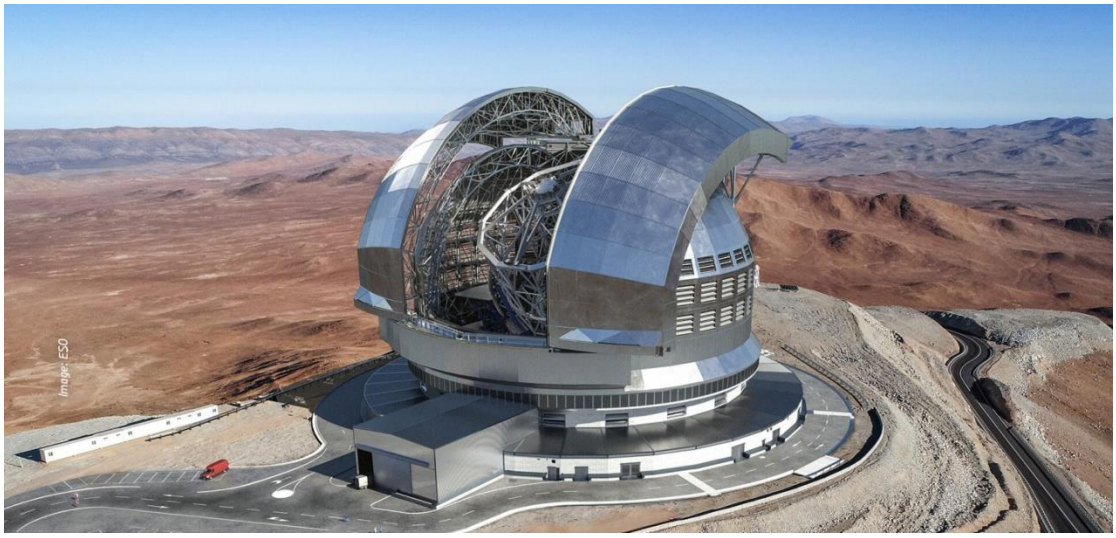
- **Vaccination** of cattle, goats, and sheep.
- **Pasteurization** of milk and dairy products to prevent transmission from animals to humans.

Extremely Large Telescope (ELT)

Syllabus: GS-3; Science & Technology

Context

- The ELT's dome and main structure are nearing completion, with the telescope expected to see "first light" by **2028**.



About

- The **Extremely Large Telescope (ELT)**, currently under construction in Chile's Atacama Desert, is one of the most ambitious astronomical projects in history.

More to know

1. **Construction Progress**:
    - The primary mirror, composed of 798 hexagonal segments, is being meticulously assembled. Each segment is actively controlled by actuators to maintain precise alignment, ensuring optimal performance.
    - The secondary mirror, one of the largest ever built (4.2 meters in diameter), has been cast and polished, marking a significant milestone.
2. **Technological Advancements**:
    - The ELT will feature advanced adaptive optics to correct for atmospheric distortions, providing images **16 times sharper** than those from the Hubble Space Telescope.
    - Its instruments, such as **MICADO** (for imaging) and **HARMONI** (for spectroscopy), are being developed to study exoplanets, black holes, and the early universe in unprecedented detail.
3. **Scientific Goals**:
    - The ELT aims to directly image Earth-like exoplanets in the habitable zones of nearby stars, analyze their atmospheres for signs of life, and study the formation of galaxies in the early universe.
    - It will also investigate dark matter and dark energy, providing insights into the fundamental nature of the cosmos.
4. **Challenges**:
    - The COVID-19 pandemic caused delays in construction and logistics, but the project is now back on track.
    - The extreme environment of the Atacama Desert, while ideal for astronomy, poses challenges for engineering and maintenance.

Key Features of the ELT

- **Primary Mirror**: 39 meters (128 feet) in diameter, made of 798 hexagonal segments.
- **Location**: Cerro Armazones, Chile, at an altitude of 3,046 meters (9,993 feet).
- **Cost**: Approximately **1.3 billion euros** ($1.4 billion).

- **Capabilities**:
  - Detect and image Earth-like exoplanets.
  - Study the atmospheres of distant planets for biosignatures.
  - Observe the universe with unparalleled resolution and sensitivity.

About the European Southern Observatory (ESO)

- **Mission**: ESO designs, builds, and operates world-class ground-based observatories to advance astronomical research.
- **Member Countries**: 16 European nations, along with host country Chile.
- **Observatories in Chile**:
  - **La Silla Observatory**: Home to several telescopes, including the New Technology Telescope (NTT).
  - **Paranal Observatory**: Site of the Very Large Telescope (VLT), one of the most advanced optical telescopes.
  - **Chajnantor Plateau**: Hosts the Atacama Large Millimeter/submillimeter Array (ALMA), a radio telescope array.
- **Headquarters**: Garching, Germany.

Why the ELT Matters?

The ELT represents a giant leap in humanity's ability to explore the universe. Its cutting-edge technology and unparalleled size will enable scientists to address some of the most profound questions in astronomy, such as:

- Are we alone in the universe?
- How do galaxies form and evolve?
- What is the nature of dark matter and dark energy?

Once operational, the ELT will redefine our understanding of the cosmos and inspire future generations of astronomers and engineers.