

# CROSS & CLIMB ROHTAK

School of Research Based Learning & Competition

## Current Affairs - 04 February 2025

### GYAN BHARATAM MISSION



The Union Budget 2025-26 announced the Gyan Bharatam Mission, under which one crore manuscripts will be conserved and documented.

- It is a special mission for the **survey, documentation, and conservation of India's manuscript heritage** lying with academic institutions, museums, libraries, and private collectors.
- It intends to cover more than one crore manuscripts.
- A **key component** of the Gyan Bharatam Mission is the **national digital repository of the Indian knowledge system**.
  - It will serve as a platform for **knowledge sharing**.
  - It will help in **digitising and centralising** India's **traditional knowledge**.
  - It will be **accessible** to researchers, students, and institutions worldwide.

### What is a Manuscript?

- A manuscript is a **handwritten composition on paper, bark, cloth, metal, palm leaf, or any other material dating back at least 75 years** that has significant **scientific, historical and aesthetic value**.
  - **Lithographs and printed volumes are not manuscripts.**
- Manuscripts are found in hundreds of **different languages and scripts**.
- Often, one language is written in a number of different scripts. For example, Sanskrit written in Oriya script, Grantha script, Devanagari script, and many other scripts.
- Manuscripts are **distinct from historical records such as epigraphs on rocks, farmans, and revenue records**, which provide direct information on events or processes in history.
- Manuscripts **have knowledge content**.

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### WORLD HEALTH ORGANIZATION (WHO)



- It is the **United Nations specialized agency** for health.
- It was established in **1948** with the objective of the attainment by all people of the highest possible level of health.
- Health, as defined in the WHO Constitution, is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.
- WHO is responsible for **providing leadership on global health matters**, shaping the **health research agenda**, **setting norms and standards**, articulating **evidence-based policy options**, providing **technical support** to countries and **monitoring and assessing health trends**.
- It has **193 member countries** and two associate members.
- It has its administrative **headquarters in Geneva, Switzerland**.

#### Structure:

- The governance of WHO **operates through the World Health Assembly**, which meets annually as the **general policy-making body**, and through an **Executive Board of health specialists** elected for three-year terms by the assembly.
- The agency is **led by a director general** nominated by the Executive Board and appointed by the World Health Assembly.

#### Funding:

- Roughly **16 percent** of the budget comes from **mandatory dues paid by members**; the rest is made up of **voluntary donations** from governments and private partners.
- In recent years, the top voluntary contributors have been **the United States, Germany, the United Kingdom**, and the **Bill and Melinda Gates Foundation**.
- Each year WHO celebrates its date of establishment, **April 7, 1948**, as **World Health Day**.

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### INDIA'S ETHANOL BLENDING TARGETS

- India is on track to achieve **20% ethanol blending in petrol** within the next **two months**, a milestone that was originally expected to be met in 2026.
- According to **Union Minister Nitin Gadkari**, the country will now produce **1,100 crore litres** of fuel ethanol annually, supporting **energy security, reducing oil imports, and benefiting farmers**.
- To meet this demand, the government is **expanding ethanol production** using **sugar, rice, and maize**, while increasing the capacity of distilleries.

#### Sources of Ethanol Production:

- The government plans to produce ethanol from **multiple sources** to ensure a stable supply. The key feedstocks include:
  - **Sugar and Molasses** – Expected to contribute **400 crore litres** annually.
  - **Food Corporation of India (FCI) Rice** – Will provide **110 crore litres** of ethanol.
  - **Broken Rice and Maize** – Estimated to supply around **400 crore litres**.
- With ethanol distillery capacity ramped up to **1,600 crore litres**, the government is ensuring **adequate production levels** through subsidies, incentives, and infrastructure investments.

#### Government Policy Initiatives:

- The government has introduced **policy reforms and incentives** to support ethanol production:
  - **Reduction in FCI Rice Price** – Price lowered from **₹28/kg to ₹22.5/kg** to make ethanol production more cost-effective.
  - **Dual-Feed Distilleries** – Sugar mills are **modifying infrastructure** to produce ethanol from both sugar and maize.
  - **Financial Incentives** – Ethanol producers benefit from **subsidized loans, guaranteed procurement, and long-term contracts**.

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### Economic and Environmental Impact of Ethanol Blending:

- **Reducing India's Oil Import Bill**
  - India imports **₹10.5 lakh crore** worth of **crude oil** annually. Ethanol blending can save **₹6,000 crore** per **100 crore litres** of ethanol produced.
- **Boosting Farmer Incomes**
  - With ethanol demand rising, **farmers are shifting to maize cultivation**, earning better returns than traditional crops.
- **Sustainable Fuel Alternative**
  - Ethanol is a **clean fuel** that reduces carbon emissions, contributing to India's **climate goals and energy security**.

### Challenges & Future Outlook:

- **Impact on Food Security** – Higher maize allocation to ethanol may affect **poultry, livestock feed, and human consumption**.
- **Need for Infrastructure Upgrades** – More **distilleries and supply chain improvements** are needed to handle higher production.
- **Market Stability Concerns** – Ensuring stable ethanol prices without affecting **food prices** remains a policy challenge.
- Despite these concerns, experts believe that **ethanol blending is a game-changer for India's energy sector**, promoting **self-reliance and sustainability**.

### Conclusion:

- India's **20% ethanol blending** target marks a **major milestone** in its transition to **sustainable energy sources**.
- With a **strong policy push**, **increased maize production**, and **expanded distilleries**, the country is set to **reduce oil imports, support farmers, and enhance energy security**.
- The future of ethanol in India depends on **continued investment, technological advancements, and balancing food security with fuel needs**. If executed well, India could become a **global leader in biofuel production**.

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### THE KIND OF JOBS NEEDED FOR THE 'VIKSIT BHARAT' GOAL

#### Essential Categories of Employment That India Must Focus On

- **Climate-Resilient Jobs**
  - Climate change is an **urgent and escalating concern**.
  - In **2019**, India ranked as the **seventh most-affected country by climate change**, suffering a \$159 billion income loss in 2021.
  - The **Reserve Bank of India (RBI)** estimates that **adaptation costs will reach nearly \$1 trillion by 2030**.
  - The **impact of climate change** on agriculture, labour productivity, and livelihoods **necessitates massive investments in rural and urban adaptation strategies**.
- **AI-Resilient Jobs**
  - The **rapid advancement of Artificial Intelligence (AI)** poses a **significant challenge to employment**, particularly in the IT and business services sectors, which currently account for over 70% of India's service exports.
  - According to McKinsey Global Institute, **50% of automation adoption in India could take place within the next decade**.
  - **Technologies such as metaGPT, AI-powered coding, and chatbot-driven customer service** are already replacing human jobs, **raising concerns about employment sustainability**.
- **Aspiration-Centric Jobs**
  - India's youth, particularly in rural areas, face a paradox.
  - While exposure to digital media and startup culture has broadened their aspirations, **their foundational education, particularly in English and technical skills, remains weak**.
  - Many still **rely on govt. jobs and coaching institutes** to secure employment, reflecting a deeper insecurity rooted in their socio-economic backgrounds.

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### NEWLY DISCOVERED ASTEROID 2024 YR4 MAY HIT EARTH IN 2032

NASA and the European Space Agency are monitoring asteroid 2024 YR4, which has a 1.2% chance of hitting Earth on December 22, 2032.

#### Asteroid

- An **asteroid** is a small, rocky object that orbits the Sun, primarily found in the **asteroid belt** between Mars and Jupiter.
- Unlike planets, asteroids are irregularly shaped and much smaller.
- They are remnants from the early solar system, formed about **4.6 billion years ago**.
- Some asteroids cross Earth's orbit and are classified as **Near-Earth Objects (NEOs)**, which are closely monitored for potential collisions.

#### Frequency of Asteroid Collisions

- Thousands of asteroids enter Earth's atmosphere daily, but most burn up due to friction.
- Some larger ones appear as fireballs, and small fragments may reach the surface without causing significant damage.
- **Impact of Large Asteroids**
  - Asteroids over a kilometer wide, like the **Chicxulub asteroid** that caused the dinosaur extinction, strike Earth very rarely—approximately once every 260 million years.
  - The vastness of the Solar System makes such impacts unlikely.
- **Threat from Smaller Asteroids**
  - Smaller asteroids can still cause regional damage. For instance, the **Chelyabinsk meteor** caused widespread destruction.
  - A 40-meter-wide asteroid could devastate an entire city, depending on its speed and angle of entry.



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### Asteroid Deflection: Strategies to Prevent Potential Collisions

- Space agencies like NASA are developing planetary defense strategies to prevent catastrophic asteroid collisions with Earth.
- **The DART Mission**
  - NASA's Double Asteroid Redirection Test (DART), in collaboration with the Johns Hopkins Applied Physics Laboratory, was the first planetary defense mission.
- **Successful Asteroid Deflection**
  - In 2022, the DART spacecraft crashed into the asteroid Dimorphos, altering its shape and trajectory.
  - Though Dimorphos was not a threat to Earth, this mission demonstrated the feasibility of asteroid deflection.

### 2024 YR4

- **Discovery and Characteristics of 2024 YR4**
    - Asteroid **2024 YR4** was discovered in December by a telescope in Chile.
    - It is a **near-Earth asteroid** measuring **40 to 100 meters**, roughly the size of a football field.
  - **Close Approach to Earth**
    - The asteroid passed 800,000 km from Earth on Christmas Day 2023, about twice the distance of the Moon.
    - It will fade from view in the coming months and reappear in **2028**.
  - **Current Observations and Challenges**
    - Scientists are using powerful telescopes to study 2024 YR4's path and size before it becomes too faint by mid-April.
    - Determining its exact size is challenging because brightness depends on reflectivity, making it hard to distinguish between a large dark asteroid and a small reflective one.
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### FUTURE OF USAID - IMPLICATIONS AND GLOBAL IMPACT

The future of the **United States Agency for International Development (USAID)** is uncertain, with the Trump administration planning its merger with the US Department of State.

This move involves significant funding cuts and a potential downsizing of USAID's workforce, **raising concerns about the future of US humanitarian aid.**

#### **What is USAID and Its Role?**

- It was established in the **1960s** to **oversee and administer international humanitarian aid.**
- USAID was established under the **Foreign Assistance Act of 1961**, making its existence **legally mandated by Congress.**
- It employs approximately 10,000 personnel, with operations in over 60 countries.
- **Its key areas of work include:**
  - **Food security:** USAID provides famine relief and operates an advanced food shortage prediction system.
  - **Healthcare:** It funds vaccination programs, pandemic prevention, and global disease control.
  - **Infrastructure and development:** The agency supports clean water initiatives, disaster relief, and economic development programs.
  - **Humanitarian aid:** USAID plays a vital role in war-torn regions like Ukraine and sub-Saharan Africa.

#### **USAID's Budget and Global Spending:**

- In 2023, the US allocated **\$68 billion** to international aid, with **USAID receiving over half** (\$40 billion).
- The largest share of USAID funds is directed toward **Asia, Africa, and Europe**, particularly **Ukraine**.
- The US remains the **largest global donor**, outspending other major aid contributors like the UK.



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### BANDHAVGARH TIGER RESERVE



- It is **nestled in the Satpura and Vindhya** mountain ranges in the Umaria district of **Madhya Pradesh**.
- The name "Bandhavgarh" is derived from the ancient **Bandhavgarh Fort**, which sits atop a hill in the park.
  - According to legend, the fort was **gifted by Lord Rama to his brother Lakshmana**, hence the name "Bandhavgarh" (**Brother's Fort**).
- It is spread over 1536 sq. km., which includes the 716 sq. km. core zone and 820 sq. km. of the buffer zone.
- It is known to have one of the **highest densities of tigers in the world**.
- The habitat is characterized by valleys, hills, and plains with the Bandhavgarh fort prominently seen as a major landmark.

**Flora:** The flora of the region comprises majorly **Sal forests, mixed forests and grasslands**.

**Fauna:** Apart from tigers, the park is home to other significant species such as **leopards, sloth bears, Indian bison (gaur), Asiatic elephants**, and a variety of **deer species**, including sambar and chital.

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