



Rapid Fire Current Affairs

Madiga Sub-Categorization

The Prime Minister of India made a recent announcement in Hyderabad (Telangana), expressing the commitment to form a committee for the **sub-categorization of the Madiga community** within the [Scheduled Castes \(SC\)](#).

- The Madiga community constitutes approximately **50% of the total SC population in Telangana**, as per the 2011 census.
 - Since 1994, the Madiga community has been advocating for the sub-categorization of the SC category, emphasizing the need for **equitable distribution of reservation benefits**.
- Madigas argue that the benefits of SC category reservations have primarily favoured the **Mala community (Dalit community in the states of Andhra Pradesh and Telangana)**, leaving the Madigas with a sense of exclusion.
 - Sub-categorization aims for the equitable distribution of reservation benefits among all the SC sub-castes.
- Madigas are historically associated with the work of tannery, leatherwork and small handicrafts. Most today are agricultural labourers.

Read more: [Criterion for SC Status](#)

Enhancing Antifungal Treatment

Recently, a study published in Nature revealed the successful modification of an antifungal agent Amphotericin B (AmB), resulting in reduced toxicity in mice and human kidney cells.

- AmB, a vital safeguard against serious **fungal infections for decades**.
 - It operates by forming aggregates that bind to **ergosterol**, a molecule found in bacterial and fungal cells.
 - Despite its efficacy, AmB is known for its high toxicity in humans, particularly in **renal cells (cells in the kidney)**.
- Researchers aimed to enhance AmB's biological activity by **modifying** specific parts of its molecule responsible for binding sterols and designed a **variant AM-2-19**.
 - AM-2-19, demonstrated reduced toxicity by selectively binding to and extracting fungal ergosterol, but not mammalian cholesterol, in human renal cells and mice while maintaining high efficacy as an antifungal treatment. It is also comparatively resilient to [antimicrobial resistance](#).

Read more: [First-Ever List of Fungal Infections](#)

P. salinarum: Unveiling Adaptation in Extreme Environments

Recent research has delved into the mysteries of **P. salinarum**, a **tiny green algae** surviving harsh saline-alkaline conditions.

- Studying the organism's molecular mechanisms, the research revealed its unique adaptations, **boosting photosynthesis and ATP (adenosine triphosphate) synthesis**, unlike most

photosynthetic life in **hyperosmotic conditions**.

- Hyperosmotic conditions refer to a situation where the surrounding environment has a higher concentration of solutes compared to the internal environment of a cell or organism
- Beyond its resilience, this **microalga showcases potential for carbon capture** and biomass production, paving the way for sustainable **biotechnological advancements**.

Widening Trade Deficit

India's trade in October 2023 depicted a **widening trade deficit**, reaching a record USD 31.46 billion.

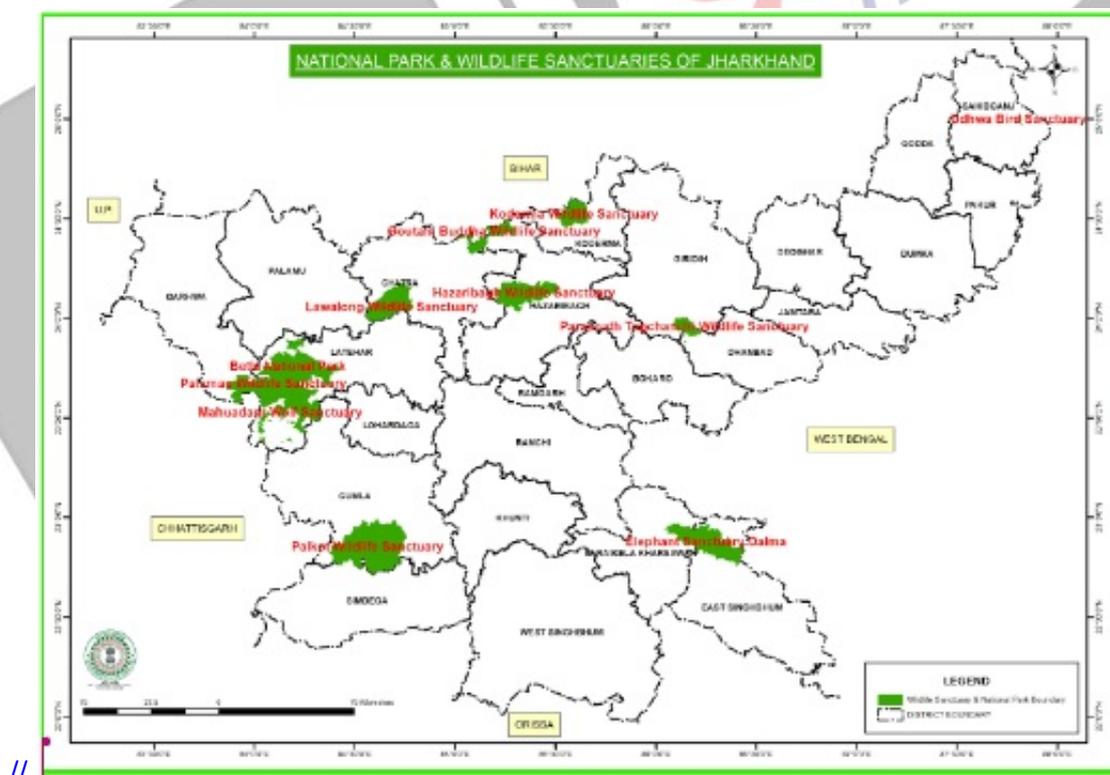
- Trade deficit represents a situation where the **value of a nation's imports exceeds** the value of its exports during a certain period
- The surge in imports, rising by 12.3% to USD 65.03 billion, was particularly **notable in gold and oil**, doubling gold imports to USD 7.23 billion and escalating oil imports to USD 17.66 billion.
 - Such deficits significantly influence **the current account and subsequently impact currency values**.

Read more: [Current Account Deficit](#)

Jharkhand Foundation Day

Jharkhand became the **28th state of India on 15th November 2000** after the **Chota Nagpur area** was segregated from the southern half of Bihar to become a new Indian state, a division enabled by the **Bihar Reorganization Act, 2000**.

- **Notably**, the day also coincides with the birth anniversary of tribal leader [Birsa Munda](#).
- Jharkhand is famous for its rich mineral resources like Uranium, Mica, Bauxite, Granite, Gold, Silver, Graphite, Magnetite, Dolomite, Fireclay, Quartz, Feldspar, Coal (32% of India), Iron, Copper (25% of India) etc.



Read more: [Birsa Munda](#)

