

## Prelim Bits 06-03-2024 | UPSC Daily Current Affairs

### MethaneSAT

Recently, MethaneSAT was launched aboard a SpaceX Falcon9 rocket from California, USA.

- **Aim** - To track and measure methane emissions at a global scale.
- To identify how much methane is coming from where, who's responsible, and are those emissions going up or down over time.
- **Promoting entity** - Environmental Defense Fund (EDF), a US-based non-profit environmental advocacy group.
- **Developing partners** - Harvard University, the Smithsonian Astrophysical Observatory, and the New Zealand Space Agency.
- **Mission partner** - Google

*While MethaneSAT is not the 1<sup>st</sup> spacecraft to identify and quantify methane emissions, it will provide more details and have a much wider field of view than any of its predecessors.*

- **Features** - It is a washing-machine-sized satellite that will orbit the Earth 15 times a day, monitoring the oil and gas sector.
- High-resolution IR sensor and a spectrometer can track differences in concentrations as small as 3 parts per billion in the atmosphere.
- It also has a wide-camera view of about 200 km by 200 km.
- The collected data will be analysed using cloud-computing and AI technology developed by Google.
- **Advantages** - Unlike previous satellites, it can pick up smaller emissions sources as well as larger emitters called 'super emitters'.
- It promotes transparency by making the data public for free in near real-time through Google's Earth Engine platform.
- It ensures accountability by allowing stakeholders and regulators to take action to reduce methane emissions.
- It will help the nations in achieving their global commitments to reduce methane emissions with real time tracking.
- **Limitations** - However, it does not necessarily mean that the data will compel polluters to curb their emissions and there's no guarantee that this information leads to a change in behaviour.

- It is an *invisible* but strong *greenhouse gas*.
- **Source** - Fossil fuel operations account for about 40% of all human-caused methane emissions.
- **Warms earth** - It is the *2<sup>nd</sup> largest contributor* to global warming after CO<sub>2</sub>.
- According to the UNEP, over a period of 20 years, methane is 80 times more potent at warming than carbon dioxide.
- **Forms ground-level ozone** - A colourless and highly *irritating gas* that forms just above the Earth's surface whose exposure could be contributing to 1 million premature deaths every year.
- **Measures** - *Global Methane Pledge* was signed by more than 150 countries in 2021, to cut their collective methane emissions by at least 30% from 2020 levels by 2030.
- At COP28 in 2023, 50 companies responsible for 40% of global oil production have agreed to virtually eliminate their methane pollution.

## References

1. [The Indian Express| Launch of MethaneSAT](#)
2. [MethaneSAT| Specifications of MethaneSAT](#)

## Women, Business and the Law Report 2024

The 10th edition of the women, business and the law report was published recently.

- An *annual studies* measuring the laws that affect women's economic opportunity.
- **Published by** - **World bank**
- **Coverage** - **190 economies.**
- **For the 1st time** - It analysed the *impact of childcare & safety policies* on women's participation in the labour market.
- It presents a new approach *to measure the implementation gap* between laws (de jure) and how they function in practice (de facto).
- **10 indicators** - Safety, Mobility, Workplace, Pay, Marriage, Parenthood, Childcare, Entrepreneurship, Assets, and Pension.

## 8 Indicators of Women, Business and the Law 1.0



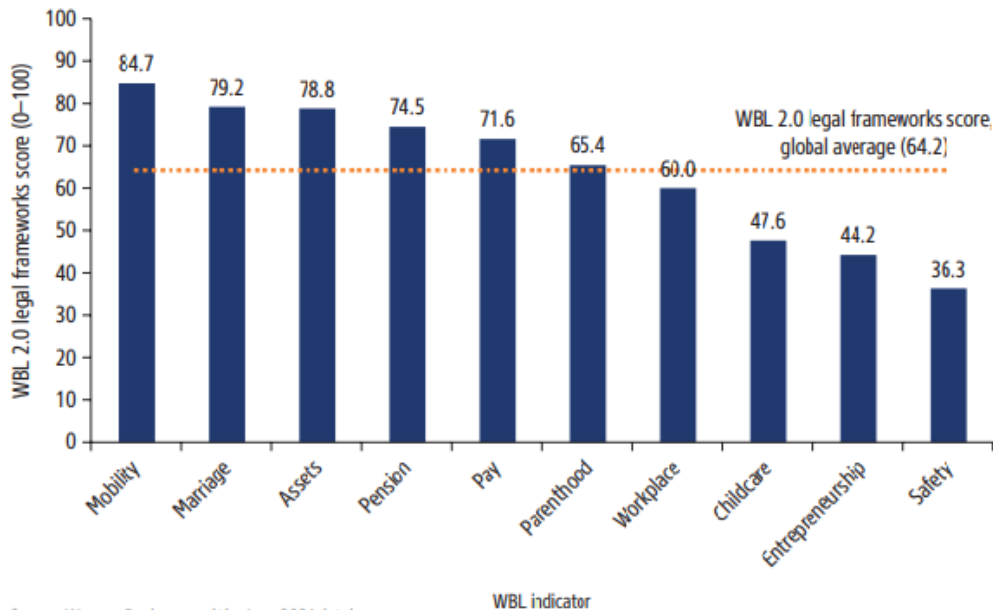
## Expanded version 'Women, Business and the Law 2.0'



## Key Findings of the Report

- **Workplace** - No country in the world affords women the same opportunities as men in the workforce.
- **Global gender gap** - It was far wider than previously thought and closing this could raise global GDP by more than 20%.
- **Pay** - Globally, women earned just 77 cents of each dollar earned by a man.
- **Pension** - In 81 countries, a woman's pension benefits do not account for periods of work absences related to childcare.
- **Parenthood** - Less than 50% the countries had financial support or tax relief for parents of young children.
- **Safety** - 151 countries had laws against sexual harassment in the workplace but only 40 countries had laws that covered abuse in public areas or on public transport.
- **Childcare** - Addressing the childcare gap would immediately lead to a 1% increase in women's participation in the labour force.
- **Legal gap** - Countries on average, established less than 40% of the systems needed for full implementation.
- Women on average enjoyed just 64% of the legal protections men do, down from the previous estimate of 77%.

## SAFETY, ENTREPRENEURSHIP, AND CHILDCARE INDICATORS HAVE THE LARGEST LEGAL GAPS



## References

1. [The Guardian| No equality for Working Women in any Country](#)
2. [World Bank| Women, Business and the Law 2024](#)

## Lac bangles

*The lac bangles known for their unique craftsmanship and historical significance have received Geographical Indication (GI) Tag.*

**Geographical Indication (GI) tag** is a form of certification that recognises unique products based on their origin which can be natural or man-made. India has enacted Geographical Indications of Goods (Registration & Protection) Act, 1999 for this purpose.

- **Lac Bangles** - A traditional form of jewellery made from natural resin and adorned with colourful stones and beads.
- **Location** - Hyderabad.
- **Type** - Handicrafts.

*Lac Bangles is the 2<sup>nd</sup> GI tag for a Hyderabad product after Haleem. It is the 17<sup>th</sup> product from Telangana to receive the recognition.*

## Origin of Lac Bangles

- Though the exact origin is not clear, historians say that the 1st bangle was manufactured during the *late Qutub Shahi period, about 300 to 350 years ago*.
- **Laad Bazaar**, where they are sold, may have emerged during the reign of Nizam VI Mir Mahbub Ali Khan, its history predates the Asaf Jahi rule.
- **Artisans** - Some say they were *Unani Hakeems of Iran* who came to the city during Qutub Shahi period took this as a secondary source of income.
- Other sources say that it belong to *artisans from Vijayanagara Empire*, who settled down in the city.
- **Material used** - It may have been studded with *pure diamonds* when they were 1st made as Golconda kingdom was known for its diamond mines and bazars.
- Over time, diamonds gave way to *decorative stones*.

- **Making** - It is crafted *from lacquer derived from resin*, undergo a meticulous process like being melted in furnaces before being *embellished with crystals, beads or mirrors*.



- **Significance** - It will serve as a catalyst to uphold uncompromising *quality standards and foster innovation* in design among the 6,000-plus artisan families.

## Reference

[Times of India| Lac Bangles receives GI Tag](#)

## Narasapur Crochet Lace

*Narasapur crochet lace craft gets Geographical Indication tag.*

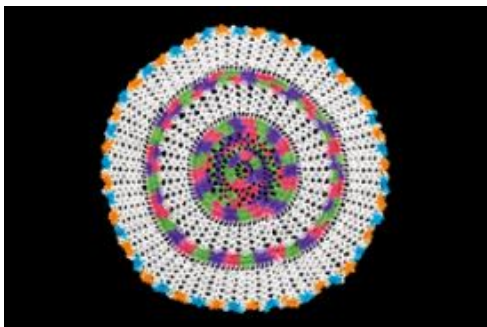
**Crochet** is a form of chain-stitch embroidery done with a hook instead of a needle. **Lace** is a delicate fabric made of yarn or thread in an open web like pattern, made by machine or by hand.

- **GI Tag** - The Department of Promotion of Industry and Internal Trade (DPIIT) under the Ministry of Commerce and Industry registered the craft in the Geographical Indications Registry (GIR).

- **Geographical limits** - 19 mandals in West Godavari and Dr. B.R.Ambedkar Konaseema districts in the Godavari region.
- **Originated in** - Narsapur, Andhra Pradesh.
- In 1844, Macrae and his wife from Scotland taught the lace craft to the local women during their missionary activities at Dummugudem (presently in Telangana).
- It has survived the Indian famine (1899) and the Great Depression (1929).

*In the year 2004, the 1<sup>st</sup> of its kind lace park in India was established in Narasapur.*

- **The lace work** - It is done using thin threads and these are again woven with thin crochet needles of varying sizes.
- **3 categories of products made of lace** — Garments, home furnishings and accessories.
- It includes Doilies, pillow covers, cushion covers, bed spreads, hand purses, caps, tops, table-runners, and table cloths etc.
- These artistically woven lace products are gifted as souvenirs.
- **Available colours** - Orange, green, blue, white, red, and beige.



- **Exported to** - Countries like UK, USA, France, etc.
- **Significance** - It empowers women as an estimated 60% of the artisans involved in the craft are women.
- It will help revive demand for the craft in global market where China's machine-made lace products are dictating terms.

## Reference

[The Hindu| GI Tag for Narasapur Crochet Lace](#)

## Majuli's Mukha Shilpa & Manuscript Paintings

*Majuli in Assam gets the prestigious Geographical Indication (GI) tag for its mask-making and manuscript painting.*

**Majuli** in Assam is the largest river island in the world.



- **A GI tag** - It is conferred upon products originating from a specific geographical region, signifying unique characteristics and qualities.
- **Majuli's Mukha Shilpa** - They are traditional handmade masks.
- **Origin** - They have been made in Assam's sattras, or monasteries, since the 16th century.
- They depict characters in bhaonas with devotional messages under the neo-Vaishnavite tradition.
- **Themes** - Gods, goddesses, demons, animals and birds.
- **Types**
  - **Mukha bhaona face mask** - It covers the face.
  - **Lotokoi hanging mask** - Bigger in size extends to the chest.
  - **Cho Mukha huge mask** - It is a head and body mask.
- **Materials used** - Bamboo, clay, dung, cloth, cotton, wood, etc.,



### Arts in Neo-Vaishnavite tradition

- **Neo-Vaishnavism** - It was introduced by the 15<sup>th</sup>-16<sup>th</sup> century reformer saint Srimanta Sankardeva.
- **Sattras** - They are monastic institutions established by Srimanta Sankardev and his disciples as centres of religious, social and cultural reform.
- They are also centres of traditional performing arts - Borgeet (songs), xattriya (dance) and bhaona (theatre).
- Majuli has 22 sattras.
- Samaguri Sattra had been practising mask-making since its establishment in 1663.

### Majuli manuscript painting

*A form of painting, also originating in the 16th century.*

- **Themes** - Illustrated numerous stories and chapters taken from the great Hindu epics Ramayana, Mahabharata and above all subjects from the Bhagavata Purana.
- **Material** - It is done on sanchi pat, or manuscripts made of the bark of the sanchi or agar tree, using homemade ink.
- **Earliest example** - A rendering of the Adya Dasama of the Bhagwat Purana in Assamese by Srimanta Sankardev.
- **Patronised by** - The Ahom kings.
- It continues to be practised in every sattra in Majuli.

### Reference

## Other Important Topics

### Shehbaz Sharif

*PM congratulates Shehbaz Sharif on being sworn in as Pakistan Prime Minister.*

- Shehbaz Sharif of Pakistan Muslim League-Nawaz (PML-N) party takes the oath as Prime Minister of Pakistan for the 2<sup>nd</sup> time.
- As per Pakistan's constitution, a party must win 133 out of the 265 contested seats in the 266-member national assembly to form a government.
- Pakistan lies just north of the **Tropic of Cancer**, bordering Iran, Afghanistan, China and India.

### Sangam: Digital Twin initiative

- **Aim** - To revolutionize infrastructure planning and management.
- The initiative was launched by the **Department of Telecommunications (DoT)**.
- It welcomes Expressions of Interest (EoI) from industry leaders, startups, MSMEs, academia, innovators, and forward-thinkers.
- **Digital Twin technology** offers a solution by creating virtual replicas of physical assets, enabling real-time monitoring, simulation, and analysis and feedback loops to achieve optimal outcomes.

### Dak Karmayogi

*The Department of Posts recently released the Special Cover commemorating successful journey of 2<sup>nd</sup> phase of Dak Karmayogi Project.*

- Dak Karmayogi is an *e-learning* portal of the **Department of Posts**.
- This portal has been developed 'In-House' under vision of '**Mission Karmayogi**'.
- To recognize the good performance of employees of Department of Posts, Meghdoot Awards were conferred in 8 different categories.
- **Meghdoot Award** is the highest award of Department of Posts at National level for overall performance and excellence introduced in 1984.

### Gevra Coal Mine

*The coal ministry recently said that Gevra mine, operated by South Eastern Coalfields Ltd (SECL) in Chhattisgarh, has received environmental nod for expansion.*

- Gevra mine got the environmental clearance to boost its production capacity to 70 million tonnes per annum.
- The expansion will position Gevra as the **largest coal mine in Asia**, overtaking **Indonesia's Sangatta mine** in coal production.
- The expansion aligns with India's aim of achieving self-sufficiency in coal production and phasing out imports for power generation by the fiscal year 2025-26 (FY26).

### India's 1<sup>st</sup> underwater metro

*Prime Minister will inaugurate India's 1<sup>st</sup> under-river metro tunnel in Kolkata.*

- The metro tunnel has been built under **Kolkata's Hooghly River** that will connect Howrah Maidan to Esplanade.
- With this, Kolkata Metro joins elite club of London, Moscow, Munich metros.
- The Howrah metro station is also the deepest in India.

### Commission on Status of Women



Pune's Dr Eeshani Bendale will join the United Nations Women UK Commission on the Status of Women as a delegate.

- The Commission on the Status of Women (CSW) is the **principal global intergovernmental body** exclusively dedicated to the promotion of gender equality and the empowerment of women.
- It is a functional commission of the Economic and Social Council (ECOSOC) established by UN Economic and Social Council resolution of 1946.
- **Secretariat** - UN Women.
- CSW membership comprises **45 States** elected by ECOSOC on the basis of equitable geographical distribution.
- India was elected to the CSW for **4 years** from 2021 to 2025.

## 2008 OS7

NASA has captured the images of a stadium sized asteroid that passed by Earth recently.

- 2008 OS7 asteroid is an Apollo class Near-Earth object (NEO) that orbits the sun once every **2.6 years**, traveling from within the **orbit of Venus to beyond the orbit of Mars**.
- The **Catalina Sky Survey**, a NASA-funded project that searches for NEOs, discovered this asteroid in 2008.
- The asteroid classified as "**potentially hazardous**" because of its large size and close approach to Earth, but it poses no threat of impact for at least the next 200 years.

## Africa Club

- Africa club is an **Alliance of African Multilateral Financial Institutions** (which are African owned and controlled).
- **Launched** - 37<sup>th</sup> African Union Summit.
- It aims to amplify Africa's influence in the global financial system by aligning its functions with the Sustainable Development Goals and the **African Union's Agenda 2063**.
- **Members**
  - African Export Import Bank,
  - Trade and Development Bank,
  - Africa Finance Corporation,
  - African Reinsurance Corporation,
  - African Trade and Investment Development Insurance,
  - Shelter Afrique Development Bank and ZEP - RE (PTA Reinsurance Co).

## Salma Dam

- Salma Dam is a **hydroelectric power project** that built on the **Hari River** in Afghanistan's Herat province.
- It was funded by the Indian government and officially known as **India-Afghanistan Friendship Dam**.
- The plant has a power generation capacity of 42 MW and is also a major irrigation resource.



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