UPSC Daily Current Affairs| Prelim Bits 11-03-2025

India Cotton Import

Why in news?

India's Cotton imports increase despite pressure on Indian cotton prices

- **Scientific name** – Gossypium.
- **Genus** - Of flowering plants in the tribe Gossypieae of the mallow family, Malvaceae.
- **Location -** Tropical and subtropical regions.
- **BT Cotton** - Genetically modified Cotton by the insertion of one or more genes from a common soil bacterium, Bacillus thuringiensis.
- **India cotton year** – October 1 to September 30.
- **India's cotton production** – India has 38% of cotton global average and 23% of the global production.
- **Surge in the cotton import –** 7 % decline in production due to reduction in acreage and excessive rainfall (2024-25), weak international cotton price and domestic price has increased by 40 % due to the MSP.
    - India ramps up cotton imports even as domestic prices face downward pressure.
- **Disparity-** Cotton farmers believe that the procurement price for cotton in India is low, while international cotton is being offered at a lower rate."
- **Top cotton producing countries (in Bales) –** China(31 Million bales), India (25), USA (14.4), Brazil(17) and Pakistan(5.2).
- **Top cotton producing states-** Maharashtra (25 %), Gujarat (20%), Telangana (15%), Andhra Pradesh (10%) and Karnataka (8%).
- **Cotton Mission, 2025-** Announced in the Budget by the Ministry of Finance, to boost the cotton productivity and farmer's income, using science and technology.
    - Through this mission India should focus on enhancing productivity to ensure Indian cotton remains competitive
- **F 5 Principles of Mission Cotton -** Farm to Fibre, Fibre to Factory, Factory to Fashion, Fashion to Foreign.

Cotton Corporation of India

• **Established** – On July 1970 as a Public Sector Undertaking under the Companies Act 1956.
• **Nodal Agency** – Ministry of Textiles.
• **Location** – CBD Belapur, Navy Mumbai, Maharastra.
• **Role and functions** – Canalizing the import and purchase of cotton, MSP operations and commercial purchasing operations.

References

1. The Hindu | India's cotton import

2. PIB | Mission Cotton

Tiger

Why in News?

To address the growing Tiger population in Maharashtra, the Maharashtra Forest Minister has recently proposed an "animal museum" with the support from Anant Ambani.

- **Scientific Name –** Panthera Tigris.
- **Conservation Status**
  - **International Union for Conservation of Nature (IUCN)** – Endangered.
  - **Wildlife Protection Act, 1972** – Schedule I.
  - **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)** – Appendix I.
- **National Tiger Conservation Authority (NTCA), 2005 –** *Statutory* body and Nodal Agency under Ministry of *Environment Forest Climate and Change.*
- **All India Tiger Estimation** – Conducted by *NTCA and Wildlife Institute of India.*
  - It is conducted every **4 years.**
  - India is home to **70%** of world's tiger population and Annual growth rate is **6.1%**.
- **Recently -** Madhav National park in MP was declared as 58th tiger reserve.
- **State-wise Tiger Distribution in India (2022)** – Madhya Pradesh (Highest in India), which is followed by Karnataka, Uttarakhand, Maharashtra and Tamil Nadu.
- **Methods Used for Estimation**
- **Camera Trapping** – Tigers are identified based on their **unique stripe patterns.**
- **M-STrIPES (Monitoring System for Tigers – Intensive Protection and Ecological Status)** – A GPS-based system for data collection.
- **Sign Surveys** – Tracking **pugmarks, scat.**
- **Line Transect Sampling** – Estimating **prey population** through field surveys.

Conservation Efforts	
Tiger Reserves	• Protected areas designated under Project Tiger. • Governed under the Wildlife (Protection) Act, 1972. • Centrally Sponsored Scheme of Project Tiger. • *58 Tiger Reserves* (As of March 2025)(58th in Madhav NP, Madhya Pradesh).
International Big Cats Alliance (IBCA)	• Aimed at conserving seven big cats such as Tiger, Lion, Leopard, Snow Leopard, Cheetah, Jaguar, and Puma.
International Awards for Tiger Reserves	• Tx2 Award (2010) aims to double the global tiger population by 2022.
Special Tiger Protection Force (STPF)	• A dedicated security force in sensitive reserves.
Conservation Assured | Tiger Standards (CA|TS)	• International accreditation ensuring best management practices. • 23 tiger reserves of India have received CA|TS accreditation.

Strict Wildlife Crime Control Measures	• NTCA has a Standard Operating Procedure (SOP) for tiger deaths, ensuring transparency.

Reference

The Hindu | Tiger

International Symposium on Health Technology Assessment (ISHTA), 2025

Why in News?

The third "International Symposium on Health Technology Assessment (ISHTA 2025)" was recently held in New Delhi.

- **ISHTA** – Is an *annual conference* that gathers experts to discuss new research and developments in Health Technology Assessment (HTA).
- **Aim** – The symposium focuses on bridging evidence and policy through effective HTA.
- It marked a significant step towards a robust Indian healthcare system.
- **Vision** – Emphasized on a holistic healthcare approach encompassing preventive, curative, and rehabilitative care.
- **Organized by** – The Department of Health Research (DHR) and Ministry of Health and Family Welfare, Government of India, in collaboration with:
  - The World Health Organization (WHO) India Country Office and
  - The Centre for Global Development (CGD).
- **Theme** – "Bridging Evidence to Policy: Health Technology Assessment for Affordable Healthcare."
- **Significance** – Would Help researchers, policymakers, healthcare professionals, and industry representatives to share ideas and collaborate.
- ***HTA*** *– It is a commonly adopted approach for generating evidence to inform decision-making in the healthcare sector and for optimizing resource use in health.*
- **HTA India resource centers** – Are spread over 19 states, which serves as an important mechanism for priority setting.
- It has helped immensely in achieving various health goals such as for TB detection, optimizing healthcare costs and incorporating evidence-based data in national health programs.
- **Open Real-Time PCR Kit** – Was recently released by the Union Health Minister which can help for the Diagnosis of Pulmonary Tuberculosis.
- **Health Technology Assessment in India (HTAIn)** - was approved for establishment with 4 divisions on 9 th May 2023.
- **Collaboration & Innovation** – Between researchers, policymakers, and industry, focusing on cost-effective health technologies.
- **Digital Health & Evidence** – Digital health technologies, like eSanjeevani and Ayushman Bharat, are bridging rural-urban gaps.
- **Challenges & Future Scope** – Policy translation and capacity building in HTA methodologies are crucial. Integrating socioeconomic and cultural contexts and

expanding HTA to emerging technologies are vital for future progress.
- The symposium fostered collaboration, knowledge sharing, and strengthened the ecosystem for cost-effective health technologies, contributing significantly to India's "Viksit Bharat" vision.

Reference

PIB| ISHTA

Collision-Less Shock Waves

Why in News?

Recently researchers have found that Collision-less shock waves could be the cosmic engines driving subatomic particles in space to extreme speeds.

- **Shock waves** – Are waves that can transmit waves at faster than the speed of sound through the atmosphere.

- **Plasma** – The shock waves are born in plasma, a gas of charged particles that can conduct electricity and interact with magnetic fields.
- **Collision less shock waves** – When the solar wind hits Earth's magnetic field, it creates special kinds of shock waves called "collision-less shock waves."
- **Occurrence** – Collision-less shock waves occur throughout the universe including:
  - Near pulsars and magnetar
  - In accretion disks around black holes
  - During supernova explosions
  - In interstellar and intergalactic media
- **Key characteristics** – Formation in low-density plasmas where particles rarely collide.
  - Unlike regular shock waves, Collision less shock waves transmits energy transmission through electromagnetic forces.
  - Capability to accelerate particles to relativistic speeds (close to light speed).
- **Natural particle accelerators** – The researchers discovered that these shock waves act like natural particle accelerators, *capable of boosting electrons to enormous speeds*.
- Using data from NASA satellites, they observed electrons reaching up to 86% of light speed near Earth.
- **Electron injection problem** – This discovery helps solve what scientists call the "electron injection problem" which explains how electrons get their initial boost before being accelerated to even higher energies in space.

The electron injection problem is the scientific term for the mystery of how electrons gain energy in outer space.

- **Implications for Cosmic Rays** –Cosmic rays could be generated due to similar interaction of planetary electrons (earth magnetosphere particles) with the Stellar winds (similar to solar wind).

Reference

The Hindu | Collision-less shock waves

Minimum Dietary Diversity

Why in News?

A new indicator on Minimum Dietary Diversity has been adopted by the United Nations Statistical Commission.

- **Minimum Dietary Diversity (MDD)** – It is a **yes/no indicator** that measures whether individuals consume at least *5 out of 10 defined food groups* within a 24-hour period.
- The 10 food groups include:
  - Grains
  - White roots, tubers, and plantains
  - Pulses (beans, peas, lentils)
  - Nuts and seeds
  - Milk and milk products
  - Meat, poultry, and fish
  - Eggs
  - Dark green leafy vegetables
  - Vitamin A-rich fruits and vegetables
  - Other vegetables and fruits
- **Adopted as** – A new indicator on Minimum Dietary Diversity (MDD) to track progress *toward Sustainable Development Goal 2* (Zero Hunger).
- **Global indicator framework** – This indicator adds to the nearly 250 indicators that are already monitored under the global indicator framework for the SDGs adopted in 2017.
- **Managed by** – The indicator would be managed jointly by FAO and UNICEF.
- **Target Groups** – Children and women of reproductive age.
  - **MDD-W** (Women aged 15-49) – **FAO** is the custodian agency.
  - **MDD-C** (Children) – **UNICEF** is the custodian agency.
- **Significance for Global Nutrition –** The MDD indicator addresses a critical gap in SDG monitoring by:
  - Shifting focus from mere calorie intake to nutritional quality.
- Recognizing that no single food group provides all essential nutrients.
- Highlighting the importance of dietary diversity in preventing micronutrient deficiencies.
- Particularly targeting vulnerable populations: children and women of reproductive age.
- **Relevance for India** – For India, with its dual challenges of undernutrition and rising non-communicable diseases, the MDD indicator offers:
  - A *tool to evaluate* the effectiveness of nutrition schemes like POSHAN Abhiyaan.
  - Metrics to *address regional and socioeconomic disparities* in diet quality.
  - Framework for designing targeted dietary interventions.
  - Alignment with India's commitment to achieving the *SDGs by 2030*.

Reference

Down to Earth | Minimum Dietary Diversity

One Liners 11-03-2025
History, Art and Culture
Child Remains in Lagar Velho *Child's remains were discovered 27 years ago in a rock shelter called Lagar Velho.* • **Lagar Velho** – It is an *archaeological site* near Leiria, central Portugal. • **Discovered in** – *1998*. • **Buried skeleton of** – 4-year-old child, dating to 25,000 years ago. • **Why in new now-** The Child combine the features of both *Neanderthals* (Homo neanderthalensis) and *modern humans* (Homo sapiens).
Polity & Governance
Bills of Lading Bill, 2025 • **Aim** – To update and simplify the legal framework for shipping documents. • **Replacement of** – Colonial-era ***Indian Bills of Lading Act, 1856*****,** providing a more modern and user-friendly approach to maritime shipping. • The 2025 bill replaces the Indian Bills of Lading Act, 1856, a law from the British colonial era. • **Passed by** – *Lok Sabha* and now presented in the Rajya Sabha.
Fisheries Startup Conclave 2.0 • **Location –** Hyderabad. • **Nodal Ministry** - Ministry of Fisheries, Animal Husbandry, and Dairying • **Promoting Innovation** – Encourages startups to develop sustainable solutions for fisheries and aquaculture. • **Government Support** – Showcases funding schemes and policy initiatives for sectoral growth. • **Enhancing Productivity** – Focuses on modern techniques to improve efficiency and sustainability
Fisheries Startup Grand Challenge 2.0 • **Functions** - It provides *financial assistance of Rs.1 crore* each to 10 winning startups for fisheries innovation. • **Aim** – To improve traceability, value chain efficiency, and logistics. • **Sustainable Growth** – Supports technology-driven solutions for eco-friendly fisheries practices.
National Fisheries Digital Platform Mobile Application • **Digital Identity** – Offers fishers, farmers, and vendors a unique ID for easy access to services. • **Scheme Integration** – Connects users to fisheries-related government initiatives digitally. • **Market Connectivity** – Provides real-time updates and linkages for better trade opportunities.

Post-Budget Webinar On Employment

• **Aim** – To last mile delivery of *care with digital infrastructure*.
• **Theme** – Investing in People, Economy, and Innovation.
• **Vision** – Investment based on *3 pillars*,
  - Education, Skill and Healthcare.
• It defines the roadmap of Viksit Bharat and impact of theme seen at a large level on the budget.

Global Engagement Scheme

• **Launched in** – *2021*.
• **Nodal Ministry** – Ministry of Culture.
• **Aim** – To promote India's rich cultural heritage including Maharashtra, internationally and enhance India's global image.
• Scheme for Promotion of International Cultural Relations renamed as 'Global Engagement Scheme'.
• **Duration** – *5 years* (2021-2026).

Economy

Insurance Regulatory and Development Authority of India (IRDAI)

IRDAI chairperson term coming to end in a few days.

• **Established in –** *1999*, under Section 4 of Insurance Regulatory and Development Authority of India (IRDAI) Act 1999.
• **IRDAI** – It is *constituted by an act of parliament*.
• **Composition (10 members)**:
  - 1 – Chairman.
  - 5 – Whole-time members.
  - 4 – Part-time members.
• **Aims is** - To achieving of Insurance for All by 2047 goal.

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