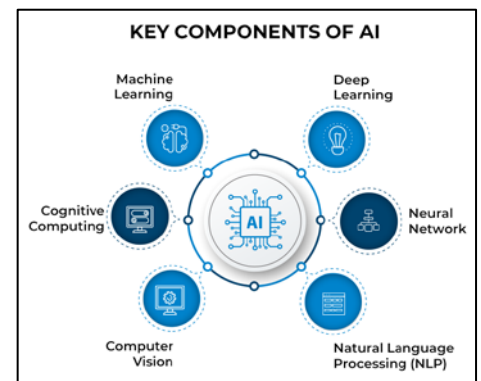


## Bletchley Declaration on AI safety

**Context:** After the UK's AI Safety Summit on November 1, 28 countries and the EU have committed to responsible AI development together.

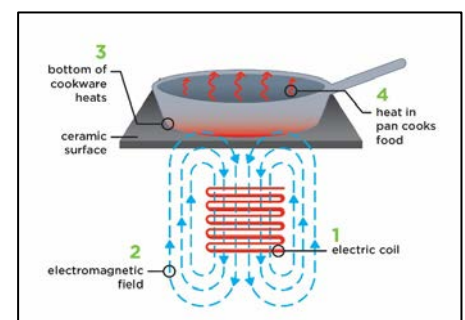
- The Bletchley Declaration, now recognized as the **inaugural global AI safety statement**, acknowledges AI's potential to improve human wellbeing, peace, and prosperity, while also recognizing its potential for serious harm.
- Signatories of the declaration have **pledged to prioritize international cooperation and the sharing of information** as AI technology continues to advance.
- The declaration marks a significant milestone, with major AI players worldwide coming together to emphasize the importance of understanding AI risks for the sake of future generations.
- **Signatories**
  - African nations like **Nigeria, Kenya, and Rwanda**, as well as Middle Eastern countries such as **Saudi Arabia and the UAE**, have endorsed the agreement.
  - Major Western economies, including **Canada and the United States**, are also signatories.
  - Notably, both the **US and China**, despite their ongoing tech disputes, have signed the declaration.
  - **Brazil and India** from the BRICS group, and ASEAN nations like **Singapore, Indonesia, and the Philippines**, are among the signatory countries.
- **Turing Test**
  - The Turing test, **originally called the imitation game** by **Alan Turing in 1950**, evaluates a **machine's ability to exhibit human-like intelligent behaviour**.
  - Turing's idea **involved a human evaluator** who assesses natural language conversations between a human and a machine.
  - The evaluator knows that one participant is a machine, and communication is text-based to avoid dependence on speech.
  - The **machine passes the Turing test if the evaluator cannot reliably distinguish it from the human** based on their responses. It's **not about the machine providing correct answers but rather responses resembling those of a human**.
  - The test is not limited to verbal interactions; it **extends to all aspects of human performance, including nonverbal or robotic behaviour**.
  - Turing **introduced the test in his 1950 paper** "Computing Machinery and Intelligence" while at the University of Manchester.
  - The Turing test has had a significant impact and attracted both praise and criticism, making it a central concept in the philosophy of artificial intelligence.
  - Criticisms, including **John Searle's Chinese room argument**, have sparked further debate and controversy.



## National Efficient Cooking Programme

**Context:** The launch of the National Efficient Cooking Programme aims to encourage the use of affordable and energy-efficient induction cookers.

- The National Efficient Cooking Programme (NECP) **introduces induction-based cook-stoves** as a cost-effective cooking solution.
- These cook-stoves **offer a 25-30% cost advantage** over traditional cooking methods, ensuring savings for users.
- NECP aims to **deploy 2 million (20 Lakh) induction cook-stoves across India** to promote environmentally friendly cooking.
- The goal is to **reduce the environmental impact of cooking**, leading to cleaner air and improved health for the population.
- **EESL (Energy Efficiency Services Limited)** has partnered with **Modern Energy Cooking Services (MECS)** for the large-scale distribution of induction cooktops.
- This deployment is expected to **boost the acceptance and widespread use** of modern electric cooking devices in Indian households.
- **Electrical Induction**
  - Electrical induction, also known as **magnetic induction**, refers to the **generation of voltage in a conductor when it interacts with a magnetic field**.
  - Electromagnetic induction involves the **motion of magnets around a coil of wire**, leading to the **creation of an electrical current** within the wire.
  - This can be **achieved by rotating magnets** while moving a coil of wire between them.
  - When magnets rotate, they **alternate between their north and south poles**.
  - When the north poles of two magnets are pushed together, they repel each other, while south and north poles attract.
  - The **attraction and repulsion between magnets cause them to rotate around the coil of wire**, resulting in the generation of an electrical current.



## Face to Face Centres





**3 November, 2023**

## ➤ Working of Induction Cookers

- **Electromagnetic Field:** An induction cooker creates a fluctuating magnetic field when powered on.
- **Special Cookware:** You need cookware with a magnetic bottom to use on the cooker.
- **Eddy Currents:** The fluctuating magnetic field induces swirling electric currents, known as eddy currents, within the cookware.
- **Heat Generation:** Eddy currents dissipate their energy as heat, heating the cookware.
- **Cookware to Food:** The hot cookware then transfers heat directly to the food inside through conduction and by moving heated liquid or air through convection.

## Adaptation Gap Report 2023

**Context:** UNEP has released its Adaptation Gap Report 2023.

- The Adaptation Gap Report is an **annual release by UNEP (United Nations Environment Programme)**.
- It is typically **published just before the year-end climate change conference**.
- The report offers a global overview of climate change adaptation efforts.
- The current edition specifically highlights the topic of adaptation finance, which refers to the funding available for implementing climate adaptation projects.
- **Key Findings:**
  - The **annual financing needed** for climate change adaptation in countries ranges from **\$215 billion to \$387 billion**, while they have been **receiving just \$21.3 billion**, according to a United Nations Environment Programme (UNEP) report.
  - **Developing nations** are estimated to **require \$387 billion annually for the next decade** to implement climate adaptation projects, accounting for 0.6% to 1% of their combined GDP.
  - For developing countries, the **central adaptation finance gap is currently estimated to be between \$194 billion to \$366 billion** per year.
  - The **adaptation finance requirements are 10-18 times higher** than the current international public adaptation fund flows, representing at least a 50% increase from previous estimates.
  - Despite intensifying climate impacts, global efforts to cut greenhouse gas emissions and enhance adaptation are falling short.
  - **Adaptation costs are projected to rise significantly by 2050**, especially under high-warming scenarios, with coastal protection expenses increasing due to sea-level rise.
  - The **world has already warmed by 1.1 degrees Celsius** since the preindustrial era, and current climate actions are insufficient to meet the goals of the Paris Agreement.
  - The **year 2023 witnessed severe extreme weather events**, with record-breaking wildfires, floods, heat waves, and other catastrophes.
  - Progress in climate adaptation is slowing on all fronts, and international **public climate finance flows to developing countries decreased by 15% to \$21.3 billion in 2021**, following a period of **increase from 2018 to 2020**.
  - The report underscores the urgent need for comprehensive climate action, including mitigation, adaptation, and addressing loss and damage.
  - Discussions on loss and damage and the doubling of adaptation efforts are lagging behind requirements.
  - At COP27, countries agreed to establish a fund for loss and damage response, but a framework for the Global Goal on Adaptation to enhance resilience remains pending.
  - In 2021, world leaders pledged to double adaptation finance to developing nations by 2025 at COP26, but previous financial commitments have not been met.

## Surveys for Monetary Policy Insights

**Context:** RBI has launched two key surveys, 'Inflation Expectations Survey of Households' and 'Consumer Confidence Survey,' to aid its bi-monthly monetary policy decisions.

### ➤ Inflation Expectations Survey of Households:

- This survey **gathers subjective assessments** of price movements and inflation.
- It **covers 19 major cities** in India, including Bhopal, Bhubaneswar, Chandigarh, Chennai, Delhi, and Thiruvananthapuram.
- **Qualitative responses** focus on households' expectations regarding price changes for the next three months and one year.
- **Quantitative responses** include current inflation rates and expectations for inflation over the next three months and one year.

## Face to Face Centres





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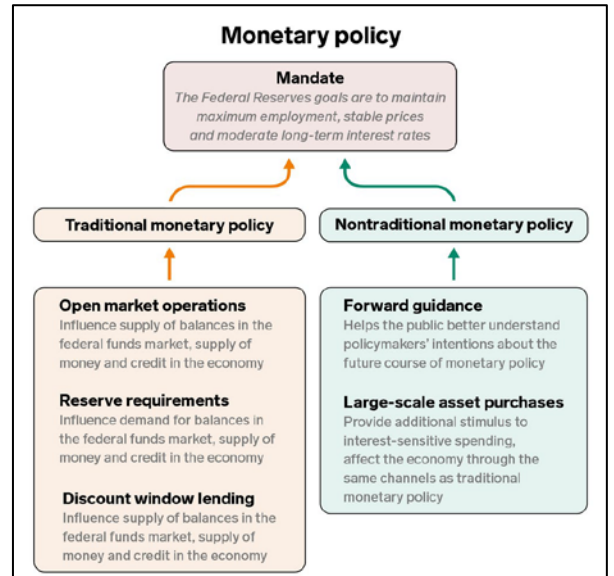
- The survey **helps the RBI understand how households perceive inflation**, providing insights into public sentiment on price stability.

➤ **Consumer Confidence Survey:**

- This survey **measures households' sentiments on various economic aspects**.
- It covers **19 cities**, including Ahmedabad, Bengaluru, Bhopal, Bhubaneswar, Chandigarh, Chennai, and Delhi.
- It seeks **responses on general economic conditions**, employment, price levels, household income, and spending.
- The survey helps the **RBI gain insights into the economic well-being** and sentiments of households across India.

➤ **Monetary Policy:**

- Monetary policy is the **central bank's (like RBI in India) approach to handling interest rates, money supply, and credit availability**.
- It is primarily **used to control inflation** in the country.
- The central bank employs tools like **REPO rate, Reverse REPO rate, SLR, CRR, etc.**, to implement monetary policy.
- In essence, monetary policy uses these tools to **regulate interest rates, money supply, and credit availability** with the **ultimate goal of maintaining price stability**.
- Price stability is **crucial for sustainable economic growth**, and controlling inflation is a key aspect.
- The **government of India sets an inflation target for every five years**, and RBI plays a significant role in this process.
- In India, the **Monetary Policy Committee (MPC), a six-member committee**, decides the policy interest rate required to achieve the inflation target.
- The MPC **meets at least four times a year**, with a **quorum of four members**. Each member has one vote, and the **Governor has a second vote in case of a tie**.
- The **resolutions** adopted by the MPC are **made public** after each meeting.
- The Reserve Bank also **publishes the Monetary Policy Report every six months**, which explains the sources of inflation and forecasts inflation for the upcoming 6-18 months.



## NEWS IN BETWEEN THE LINES

### World Food India 2023



Prime Minister of India will inaugurate the second edition of the Mega food event 'World Food India 2023' today at Bharat Mandapam in New Delhi.

**About World Food India 2023:**

- 'World Food India 2023' is a **global event** organized by India's **Ministry of Food Processing Industries** to showcase India's food culture and attract global investments in the food processing sector.
- This event will focus on five key elements, including **millet, organic produce, indigenous processed food, nutritional awareness and food processing technologies**.
- World Food India 2023' will showcase innovative **Ayush Aahar** products of Ayush.
- **18 start-ups** from across the country will present more than **30 Ayush products** at the Ministry of Ayush.

### Mhadei Wildlife Sanctuary



Recently on July 24, 2023, the Goa bench of the Bombay HC has directed the Goa government to notify a tiger reserve in Mhadei Wildlife Sanctuary and other contiguous areas within three months.

**About Mhadei Wildlife Sanctuary:**

- Mhadei Wildlife Sanctuary is located in the **northern part of Goa, near Valpoi**.
- The sanctuary features picturesque waterfalls, including the prominent **Vazra Sakla Falls and Virdi Falls**.
- **Flora:** It is densely forested with a variety of **moist deciduous and evergreen vegetation**, including sacred **groves** protecting rare and **indigenous trees**.
- **Fauna:** The sanctuary is home to a diverse range of wildlife, such as Indian gaur, **Barking deer, Sambar deer, Asian palm civet, small Indian civet, Wild boar, Indian hare** and more.

**Herpetologist's Paradise:** The sanctuary attracts herpetologists with all of the 'big four' of Indian venomous snakes - **Indian krait, Russell's viper, Saw-scaled viper, and Spectacled cobra**.

## Face to Face Centres







**3 November, 2023**

## United Nations Environment Programme

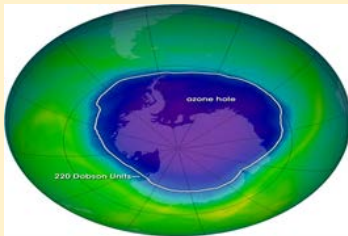


Recently, the UNEP (United Nations Environment Programme) has reported that the adaptation gap in developing countries is expanding, even as extreme weather events continue to worsen.

### About United Nations Environment Programme:

- The United Nations Environment Programme is a leading global environmental authority that was established in **1972**.
- Its headquarters are located in **Nairobi, Kenya**.
- It is considered the **highest decision-making body** on environmental matters globally.
- UNEP's key focus areas includes, **Climate change, Ecosystem management**, Disaster and conflict management, Environmental governance, Resource efficiency, Management of chemicals and waste and Environment under review.
- United Nations Environment Programme plays a pivotal role in setting the global environmental agenda.
- It works to ensure the coherent implementation of the environmental dimension of sustainable development within the United Nations system.

## Antarctic Ozone Hole



Recently, on **September 21, 2023**, the Antarctic ozone hole has grown to its largest size at **10 million square miles**, according to the observations by NOAA and NASA.

### About the Antarctic Ozone Hole:

- The Antarctic ozone hole is as an area where ozone levels fall below the historical threshold of **220 Dobson units**.
- The ozone layer acts as **Earth's natural sunscreen**, shielding against harmful **ultraviolet rays** that can cause health issues like **skin cancer** and **cataracts**.

### Causes:

- Ozone depletion is primarily due to the release of chemical substances, including **chlorine** and **bromine** compounds, into the stratosphere, leading to the breakdown of ozone molecules.
- **Chlorofluorocarbons (CFCs)** were widely used in consumer products before being phased out under international agreements.
- The eruption of the **Hunga Tonga-Hunga Ha'apai volcano** in January **2022** had a notable influence on the size of the ozone hole in 2023.

### Montreal Protocol:

The **1987 Montreal Protocol** is a significant international treaty that has successfully reduced emissions of ozone-depleting substances, contributing to the recovery of the stratospheric ozone layer.

## Proteinuria



### About Proteinuria:

- Proteinuria refers to the **presence of an abnormal amount of protein**, primarily albumin, in the urine.
- It is a crucial marker **used to detect and diagnose kidney disease**.
- It can be detected qualitatively using **urine test** strips in routine examinations.
- For precise information, quantitative measurements can be made, often expressed as a protein-to-creatinine ratio.
- **Gold standard** test is the most accurate measurement of proteinuria involves a 24-hour urine sample to quantify the amount of protein excreted.
- Proteinuria indicates damage to the microscopic **vessels (glomeruli)** in the kidneys, where proteins like **albumin** should normally be retained.
- Various drugs, such as **ACE inhibitors, ARBs, SGLT2** inhibitors and anti-aldosterone drugs are used to lower proteinuria and slow down kidney damage.

## E-cigarettes



### About E-Cigarettes:

- E-cigarettes are also known as **electronic cigarettes** or **vaping devices**.
- E-cigarettes typically **consist of a battery**, an atomizer and a cartridge containing e-liquid, which may contain **nicotine, flavourings** and other chemicals.
- Though, it less harmful than traditional cigarettes, still **pose risks like nicotine addiction** and **potential health issues**.
- Some countries have banned e-cigarettes entirely, while others have implemented restrictions on sales, advertising and use.
- The **World Health Organization (WHO)** recommends strict regulation of e-cigarettes, including banning advertising and flavourings to protect public health.

### About Nicotine:

- Nicotine is a plant **alkaloid** found in various plants, including the tobacco plant.
- It possesses both sedative and stimulant qualities, impacting the **nervous system**.
- Karnataka has recently classified nicotine as a **Class A poison**.

### Usage in E-cigarettes:

- Nicotine is directly used in e-cigarettes, with concentrations in e-liquids ranging up to **36 mg/mL**.
- In regular cigarettes, nicotine content typically ranges between **1.2 to 1.4 mg/mL**.

## Face to Face Centres





3 November, 2023

## Place in News

### Kozhikode

Kozhikode in Kerala and Gwalior in Madhya Pradesh have been recently included in UNESCO's Creative Cities Network (UCCN) for their contributions in the fields of literature and music, respectively.

#### About Kozhikode:

- Kozhikode, also known as **Calicut**, is situated along the **Malabar Coast** in the state of Kerala, India.
- Kozhikode has been included in the UCCN in the category of "**Literature**."

#### Historical Significance:

- The city has a rich literary and cultural heritage, known for producing **prominent writers**, including the author of the first Malayalam novel, **Appu Nedungadi**, who wrote "**Kundalatha**" in 1887.

#### About UNESCO's Creative Cities Network:

- UCCN was established in **2004** to promote collaboration among cities that prioritize creativity for sustainable urban development.
- It comprises **350** cities across more than **100** countries and aims to harness the creative, **social** and economic potential of cultural industries.
- UCCN focuses on seven creative fields including **crafts and folk arts, design, film, gastronomy, literature, media arts** and music.
- Apart from Kozhikode and **Gwalior**, **Varanasi** (music), **Srinagar** (crafts and folk arts) and **Chennai** (music) are also part of the network.



## POINTS TO PONDER

- ❖ Which Indian-assisted development project connects Mongla Port and Khulna rail network through a broad-gauge rail route? - **Khulna-Mongla Port Rail Line**
- ❖ Which Acts govern the directive related to Payment Aggregators (PAs) and Cross-Border Payments? - **Payment and Settlement Systems Act, 2007, and Foreign Exchange Management Act, 1999**
- ❖ What does CMIP6 stand for? - **Coupled Model Intercomparison Project – 6**
- ❖ Which sector has seen an increase in its contribution to agriculture from 24.32% (2014-2015) to 30.87% (2020-21)? - **Livestock**
- ❖ When was the NWR (Negotiable Warehouse Receipt) system launched? - **2011**

## Face to Face Centres

