



**Most Trusted Learning Platform**



# GENERATIVE ARTIFICIAL INTELLIGENCE, Multi Modal AI

- **Generative AI enables users to quickly generate new content based on a variety of inputs.**
- **Inputs and outputs to these models can include text, images, sounds, animation, 3D models, or other types of data.**
- **Generative AI algorithms can be used to create new, original content, such as images, videos, and text, that's indistinguishable from content created by humans.**
- **This can be useful for applications such as entertainment, advertising, and creative arts.**
- **For example, popular applications like ChatGPT, which draws from GPT-3, allow users to generate an essay based on a short text request.**
- **On the other hand, Stable Diffusion allows users to generate photorealistic images given a text input.**

# GENERATIVE ARTIFICIAL INTELLIGENCE, Multi Modal AI

- **Multimodal AI refers to artificial intelligence systems and models that can process and understand information from multiple modalities or sources of data.**
- **Modalities in this context refer to different types of data, such as text, images, audio, video, and sensor data.**
- **Multimodal AI aims to integrate and analyze information from these diverse sources to make more comprehensive and context-aware decisions.**

# NATIONAL GREEN HYDROGEN MISSION

- The National Green Hydrogen Mission has been approved by the Union Cabinet on 4th January 2023.
- The overarching objective of the Mission is to make India the Global Hub for production, usage and export of Green Hydrogen and its derivatives.
- Concerned Ministry: Ministry of New & Renewable Energy

# NATIONAL GREEN HYDROGEN MISSION

The Mission will result in the following likely outcomes by 2030:

- Development of green hydrogen production capacity of at least 5 MMT (Million Metric Tonne) per annum with an associated renewable energy capacity addition of about 125 GW in the country
- Over Rs. Eight lakh crore in total investments
- Creation of over Six lakh jobs ✕
- Cumulative reduction in fossil fuel imports over Rs. One lakh crore
- Abatement of nearly 50 MMT of annual greenhouse gas emissions ✓

# NATIONAL GREEN HYDROGEN MISSION

Depending on the nature of the method of its extraction, hydrogen is categorised into three categories, namely, Grey, Blue and Green.

1. **Grey Hydrogen:** It is produced via coal or lignite gasification (black or brown), or via a process called steam methane reformation (SMR) of natural gas or methane (grey). These tend to be mostly carbon-intensive processes.

2. **Blue Hydrogen:** It is produced via natural gas or coal gasification combined with carbon capture storage (CCS) or carbon capture use (CCU) technologies to reduce carbon emissions.

3. **Green Hydrogen:** It is produced using electrolysis of water with electricity generated by renewable energy. The carbon intensity ultimately depends on the carbon neutrality of the source of electricity (i.e., the more renewable energy there is in the electricity fuel mix, the “greener” the hydrogen produced).

# Reports and Index:

## **WORLD ECONOMIC SITUATION AND PROSPECTS**

It is released annually by UN Department of Economic and Social Affairs (DESA)

It projects global economic growth to further slow down from an estimated 2.7% in 2023 to 2.4% in 2024

## **GLOBAL RISK REPORT**

Annual Publication by World Economic Forum

The Global Risks Report explores some of the most severe risks we may face over the next decade, against a backdrop of rapid technological change, economic uncertainty, a warming planet and conflict.

# Reports and Index:

## **Global Economic Prospects report**

The World Bank's Global Economic Prospects report is a flagship report.

According to the report, the global economy is expected to grow by 1.7% in 2023 and 2.7% in 2024.

This is a widespread downturn, with 95% of advanced economies and nearly 70% of emerging market and developing economies having their 2023 forecasts revised down

# Places in News

- **Guyana**
- **Pravasi Bharatiya Samman Award is the highest honour conferred on overseas Indians during the Pravasi Bharatiya Divas Convention**
- **Guyana's President Mohamed Irfaan Ali is among 21 recipients of the 17th Pravasi Bharatiya Samman Award (PBSA)**

# Places in News



→ Brazil  
→ Venezuela  
→ Suriname





Feb 2023

# Political party and Symbol

Who allots election symbols to political parties in India?

- The Election Commission of India has the power under The Election Symbols (Reservation and Allotment) Order, 1968
- Two types of symbols
- Exclusive Symbol – Reserved for recognised political parties
- Free Symbol – Can be used by any other non-recognised political party or candidates (It is not permanent)
- EC is also empowered to look into any dispute related to symbol, party name etc.

# CHICAGO CONVENTION

- It establishes the privileges and obligations of all contracting States
- It established the International Civil Aviation Organization (ICAO)
- It is a specialized agency of the United Nations charged with coordinating international air travel.
- It establishes rules of airspace, aircraft registration and safety, security, and sustainability, and details the rights of the signatories in relation to air travel.

# CHICAGO CONVENTION

India is also a party.

- New Changes
- It refrains member States from resorting to the use of weapons against civil aircraft in flight. ✓
- It calls for raising the strength of the ICAO Council from 36 to 40. ✓
- It calls for raising the strength of the Air Navigation Commission from 18 to 21. ✓

India has ratified this convention.

# FATF suspends Russia's Membership

- The global money laundering and terrorist financing watchdog
- An intergovernmental body (39 Countries including India) established through the G7 summit ✓✓
- FATF is a task force composed of member governments who agree to fund the FATF on a temporary basis with specific goals and projects (a "mandate").
- The FATF Secretariat (currently 40 people) is housed administratively at the OECD.

# FATF suspends Russia's Membership

- The decision-making body of the FATF is known as its plenary, which meets thrice a year.
- World Bank, some offices of the United Nations and regional development banks also participate in its meeting as observers.
- To assess the strength of anti-money laundering and anti-terror financing frameworks of different countries

# FATF suspends Russia's Membership

- Lists of FATF
  - **Black List: Call for Action**
  - It features countries that the group has considered non-cooperative in the global fight against money laundering and terror financing.
  - **Countries: North Korea, Myanmar and Iran**
  - **Grey List: Other monitored jurisdictions**
  - It features countries where the FATF trains a bigger lens on the financial goings-on of a country to ensure they are meeting the recommendation criteria set out by the organisation.
  - **Currently, there are 23 countries on the grey list**

# GLOBAL BIOFUEL ALLIANCE

→ India led Alliance

- GBA is a multi-stakeholder alliance of Governments, International Organizations and Industries
- It brings together the biggest consumers and producers of biofuels and interested Countries from the Global South to drive the development and deployment of biofuels
- It aims to position biofuels as a key to energy transition.
- Nineteen countries and 12 international organizations have already agreed to join or support the GBA.
- The alliance will also act as a central repository of knowledge and an expert hub.

# Social Stock Exchange

- A social stock exchange is a platform where social enterprises/organizations can raise funds from the public.
- Just like equity, commodities, derivatives, and small and medium-sized enterprises (SMEs), the social stock exchange will be a segment on the stock exchange.
- Both BSE and NSE have received approvals to run an SSE.
- Organizations listed on the SSE can be For-profit Social Enterprises (FPEs) and Not-for-profit Organizations (NPOs)

# Zero Coupon Zero Principal (ZCZP) bonds

- A new instrument called Zero Coupon Zero Principal (ZCZP) bonds has been conceived and approved.
- These have a zero coupon and no principal payment at maturity
- It may be issued to NPOs for social development projects/activities, in which the NPO has demonstrated expertise.
- ZCZP may not offer financial returns to the investor like conventional investment instruments, but they come with the promise of a social return on the investment to the funder.

# Mahila Samman Savings Certificate

- The Mahila Samman Savings Certificate 2023 is available for two years, from April 2023-March 2025. ✓
- **Eligibility:** The Mahila Samman Savings Certificate can be done only in the name of a girl child or woman. A woman or the guardian of a minor girl child can open a Mahila Samman Saving Certificate scheme.
- Investment – Min 1,000 and max – 2 lakhs
- No subsequent deposit shall be allowed in that account.
- It will offer a fixed interest rate of 7.5% Per Annum Compounded Quarterly

# Mahila Samman Savings Certificate

- **The account holder shall be eligible to withdraw a maximum up to 40% of the Eligible Balance once after the expiry of one year from the date of opening of the account but before the maturity of the account.**
  - **The Customer can open multiple accounts under this scheme, however, 2nd account can be opened only after a time gap of three months from the date of opening of 1st account and so on. However total deposit including all the accounts should not exceed Rs 2 Lacs.**
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# VIBRANT VILLAGES PROGRAMME (VVP) SCHEME

- A Centrally Sponsored Scheme
- Concerned Ministry: Ministry of Home Affairs
- For the development of villages on the northern border
- States covered: Himachal Pradesh, Uttarakhand, Arunachal Pradesh, Sikkim and Ladakh.
- The district administration with the help of Gram Panchayats will prepare the Vibrant Village Action Plans
- The objective of the programme is the comprehensive development of these villages to improve the quality of life of people & thereby reversing outmigration.

## **MISHTI (Mangrove Initiative for Shoreline Habitats & Tangible Incomes) scheme (MoEFCC)**

- It will facilitate mangrove plantations along India's coastline and on saltpan lands.
- The programme will operate through "convergence between MGNREGS, Campa Fund and other sources"
- It spreads across **11 States** and **2 Union Territories** during five years commencing FY 2023-24 onwards
- It will aim at intensive afforestation of coastal mangrove forests.
- All global mangroves can sequester up to 21 million tonnes of carbon per year, about **10 times greater** than equivalent upland tropical forests.
- Globally, the rate of mangrove decline is approximately 1% per year; India has recorded a net increase of 946 sq km between 2017 and 2021.



## Mangroves

- Occurs in areas of water logging.
- delta Regions / Coastal
- Survive in Saline / brackish water.
- Characterized by Pneumatophores.
- Small leaves, waxy cover on leaves.
- Viviparous mode of Reproduction
- Indonesia → highest mangrove vegetation

→ Sunderban - Single layered  
mangrove patch

→ West Bengal > Gujarat

## Paris Club

- **The Paris Club, an informal group of creditor nations**
- **It will provide financial assurances to the International Monetary Fund on Sri Lanka's debt.**
- **It is a forum of 22 countries (founded in 1956) that act as official creditors and meet to solve payment difficulties faced by debtor countries.**
- **Member Countries are- Australia, Austria, Belgium, Brazil, Canada, Denmark, Finland, France, Germany, Ireland, Israel, Italy, Japan, Korea, Netherlands, Norway, Russian Federation, Spain, Sweden, Switzerland, United Kingdom, United States of America.**

# Paris Club

- All 22 are members of the group called Organisation for Economic Co-operation and Development (OECD).
- It operates on the principles of consensus and solidarity. Any agreement reached with the debtor country will apply equally to all its Paris Club creditors.
- A debtor country that signs an agreement with its Paris Club creditors, should not then accept from its non-Paris Club commercial and bilateral creditors such terms of treatment of its debt that are less favourable to the debtor than those agreed with the Paris Club.

# BharOS

- **BharOS is a mobile operating system (OS) developed by IIT Madras and funded by the Indian government.**
- **The project's goal is to reduce the reliance on foreign OSs in smartphones and promote the use of locally developed technology**
- **BharOS is an Android Open-Source Project and is technically very similar to Android.**
- **It uses a system called Private App Store Services (PASS) to examine and curate apps that are safe for users.**
- **Users can use other apps as long as they meet BharOS' PASS standards**

# BharOS

BharOS

- **BharOS** would offer Native Over The Air (NOTA) updates, meaning that security updates and bug fixes will be automatically installed rather than users having to check for updates and implementing them on their own,
- **BharOS** comes with the No Default Apps (NDA) setting, meaning that users do not have to keep or use pre-installed apps in this mobile operating system
- **NDA** is key as many pre-installed apps that currently ship with other smartphones can slow down the device or take a toll on battery life by acting as bloatware.

## Species in News: RED SANDERS

- **Red Sanders (Red Sandalwood) has fallen back into the 'endangered' category in the International Union for Conservation of Nature's (IUCN) Red List.**
  - **The species is endemic to a distinct tract of forests in Andhra Pradesh. It was classified as 'near threatened' in 2018 and has now joined the 'endangered' list once again in 2021.**
  - **The species, Pterocarpus santalinus, is an Indian endemic tree species, with a restricted geographical range in the Eastern Ghats.**
-

Endemic species → species which  
are native to  
a particular area  
→ grow naturally.

## Alien invasive species

- species from foreign ecosystem
- can hamper the growth of native species

## Species in News: RED SANDERS

- **Red Sanders (*Pterocarpus santalinus*) known for their rich hue and therapeutic properties, are high in demand across Asia, particularly in China and Japan, for use in cosmetics and medicinal products as well as for making furniture, woodcraft and musical instruments.**
- **Its popularity can be gauged from the fact that a tonne of Red Sanders costs anything between Rs 50 lakh to Rs 1 crore in the international market**

# Species in News: Pangolin

- toothless and nocturnal! When threatened, they curl up into a tight ball.
- also known as scaly anteaters, are the only known mammals with large keratin scales covering their skin
- Habitat- In the entire country, South of Himalayas except North East India
- Chinese Pangolin in North Eastern States



Curly

# Species in News: Pangolin

- **Conservation Status:**
- **IUCN- Endangered (Chinese Pangolin- Critically Endangered)**
- **WPA- Schedule I**
- **CITES- Appendix I**
- **New: CITES member agreed to remove the references to pangolins from 'official pharmacopela'**



# CITES

→ Intergovernmental treaty

→ legally binding

→ WPA 1972, Biological Diversity Act 2002

↓  
Amended in 2022.

Feb 2024



Economic Survey

# CITES

↓  
Appendices

App-I → trade is entirely prohibited

App-II → trade is regulated

App-III → It is protected in at least one of member countries of CITES

# WPA (2022)

Schedule - I → highly protected  
animal species

Sch - II → protected animal  
species

Sch - III → Protected plant species

Sch IV → CITES species.



# KHAN GLOBAL STUDIES

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**THANKS FOR WATCHING**

