

Green Shipping

Context: The Ministry of Ports, Shipping, and Waterways highlighted Green Shipping during a workshop on 'Green Inland Vessels Transition.'

- MoPSW has actively pursued net zero emissions, aligning with the objectives of 'MIV 2030' and 'Amritkal Vision 2047.'
- The Government underscores the pivotal role of the maritime sector in realizing Green Sustainable Transportation.
- Initiatives by MoPSW complement the goals of the 'National Green Hydrogen Mission' and 'Harit Sagar Guidelines.'
- **Environmental Impact of Shipping**
 - The global supply chain heavily relies on shipping, contributing to an increasing share of CO₂ and greenhouse gas emissions.
 - The maritime sector alone emits 940 million tonnes of CO₂, constituting 2.5% of total greenhouse gas emissions.
 - Ships traditionally use heavy fuel oil with sulfur emissions detrimental to health and causing acid rain.
 - IMO Sulphur 2020 mandates ships to switch to alternative fuel oils emitting less than 0.50% sulfur since January 1, 2020, aiming for a 77% reduction in SO_x emissions.

➤ What is Green Shipping?

- Green shipping emphasizes minimizing resource and energy use in maritime transportation to mitigate environmental pollution.

• Strategies for Green Shipping:

▪ LNG as an Alternative Fuel:

- ✓ Alternative fuel option reducing CO₂ by 20% while minimizing SO_x and NO_x emissions.
- ✓ Safety concerns need addressing.

▪ Slow Steaming:

- ✓ Efficient method reducing emissions by 19% by decreasing ship speed by 10%.
- ✓ Economically and environmentally beneficial, reducing energy consumption during port calls.

▪ Reducing Empty Containers:

- ✓ Collaboration among carriers to share containers, reducing shipping costs and CO₂ emissions from empty containers.

▪ Water Management:

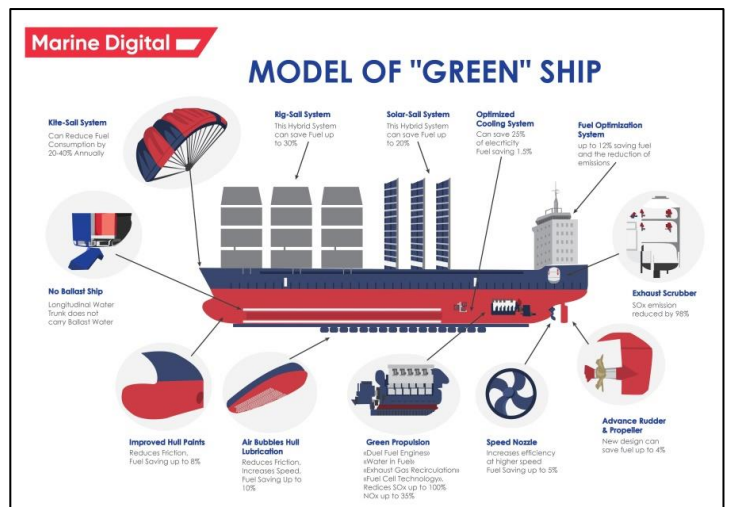
- ✓ Adoption of advanced ballast water management systems, using filtration and electro-chlorination to prevent ecological threats.

▪ Renewable Energy:

- ✓ Harnessing wind and solar energy to power ships, reducing fuel consumption and greenhouse gas emissions.

• Green Shipping Initiatives in India:

- India chosen for the IMO Green Voyage 2050 project, launching the Green Tug Transition Programme (GTPP) and the Centre of Excellence in Green Port & Shipping (NCoEGPS).



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- Green Hybrid Tugs powered by hybrid propulsion systems to shift towards non-fossil fuel solutions like Methanol, Ammonia, and Hydrogen.
- India aims for 60% renewable energy in major ports, reducing carbon emissions by 30% per ton of cargo by 2030.
- Paradip Port, Deendayal Port, and V.O. Chidambaram Port designated Hydrogen Hubs for handling, storing, and generating green hydrogen by 2030.
- Maritime Vision Document 2030 launched for a sustainable maritime sector and a vibrant blue economy in India.

Cyclone Michaung

Context: The India Meteorological Department (IMD) predicts the formation of a cyclonic storm named Cyclone Michaung in the southwest Bay of Bengal on Sunday, December 3rd.

- Cyclone Michaung is expected to make landfall in the coastal districts of Tamil Nadu and Andhra Pradesh.
- The India Meteorological Department (IMD) has issued an '**orange**' alert for **Tamil Nadu**, coastal, and interior Andhra Pradesh for Sunday and Monday.
- This cyclone marks the **fourth tropical cyclone of the year in the Bay of Bengal**.
- The **National Disaster Management Authority (NDMA)** categorizes cyclones into **two main types**: extratropical cyclones and tropical cyclones.

➤ Cyclones:

- A cyclone is a large-scale system of air that rotates around the centre of a low-pressure area, accompanied by violent storms and adverse weather conditions.
- As per the National Disaster Management Authority (NDMA), a cyclone is characterized by inward spiralling winds that rotate anticlockwise in the Northern Hemisphere and clockwise in the Southern Hemisphere.

➤ Extratropical Cyclones:

- Extratropical cyclones, also known as mid-latitude cyclones, occur outside the tropics, beyond the areas covered by the Tropic of Cancer and the Tropic of Capricorn.
- These cyclones have cold air at their core and derive energy from the release of potential energy during the interaction of cold and warm air masses.
- Extratropical cyclones always have one or more fronts connected to them, which are boundaries between different air masses, such as warm and cold air.
- They can occur over both land and ocean.

➤ Tropical Cyclones:

- Tropical cyclones develop in the regions between the Tropics of Capricorn and Cancer and are the most devastating storms on Earth.

	NO SEVERE WEATHER EXPECTED Keep up to date with latest forecast
	BE AWARE Remain alert and keep up to date with latest forecast
	BE PREPARED Remain vigilant, keep up to date with latest forecast and take precautions where possible
	TAKE ACTION Remain extra vigilant, keep up to date with latest forecast. Follow orders and any advice given by authorities and be prepared for extraordinary measures

Category	Sustained winds (3-min average)
Super Cyclonic Storm	≥120 kt ≥221 km/h
Extremely Severe Cyclonic Storm	90–119 kt 166–220 km/h
Very Severe Cyclonic Storm	64–89 kt 118–165 km/h
Severe Cyclonic Storm	48–63 kt 89–117 km/h
Cyclonic Storm	34–47 kt 63–88 km/h
Deep Depression	28–33 kt 51–62 km/h
Depression	17–27 kt 31–50 km/h

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- These cyclones form when thunderstorm activity builds close to the centre of circulation, and the strongest winds and rain are no longer in a band far from the centre.
- The core of the storm turns warm, and the cyclone derives most of its energy from the latent heat released during the condensation of water vapour evaporated from warm ocean waters into liquid water.
- Unlike Extratropical cyclones, tropical cyclones are not associated with warm fronts or cold fronts.
- Tropical cyclones are known by different names based on their location and strength, such as hurricanes in the Caribbean Sea, the Gulf of Mexico, the North Atlantic Ocean, and the eastern and central North Pacific Ocean. In the western North Pacific, they are referred to as typhoons.

Global Drought Snapshot

Context: A global drought map reveals that 23 countries declared a state of drought emergency in 2022-23, emphasizing the widespread impact of severe drought conditions worldwide.

➤ Global Drought Emergency Declarations:

- 23 countries, including India, declared drought emergencies at national or sub-national levels in 2022-23.
- Data sourced from a global drought map compiled by the United Nations.

➤ UNCCD Report Highlights:

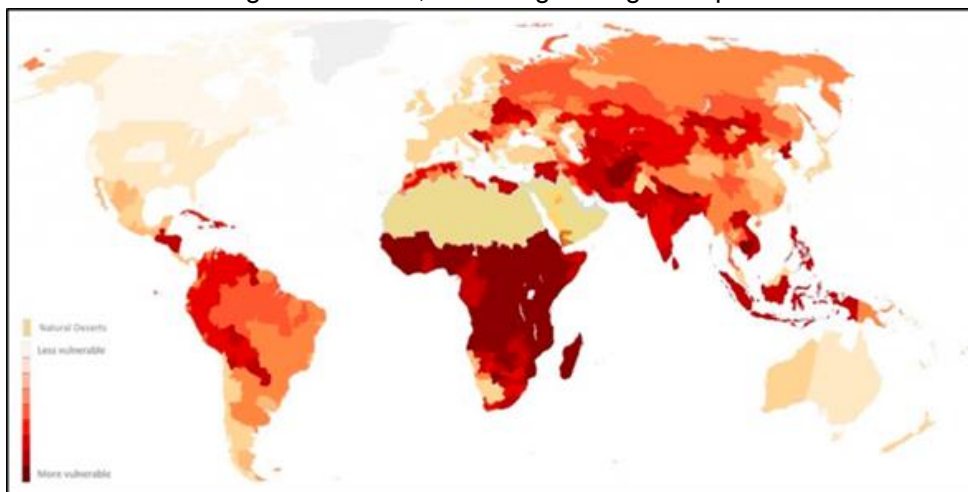
- Global Drought Snapshot report released by the United Nations Convention to Combat Desertification (UNCCD).
- Stressed the severe impact of drought, which claims lives, causes economic losses, and affects various sectors.

➤ Drought-Impacted Population:

- 1.84 billion people were affected by drought, with 4.7% exposed to severe or extreme drought.
- Data based on reporting by 101 Parties to the UNCCD.

➤ Regional Emergency Declarations:

- Europe had the highest number of emergency declarations (8), with countries like Spain, Italy, the United Kingdom, Greece, Portugal, Romania, and Serbia declaring emergencies.
- Europe faced extensive drought conditions, recording its largest impacted area in 2022.



➤ Global Drought Trends:

- Droughts expanded in territory and intensity, affecting countries like the United States and Canada.
- Asia witnessed drought emergencies in India, Sri Lanka, Indonesia, Kazakhstan, and China during 2022-23.

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- **Record-Breaking Heat in 2023:**
 - 2023 marked several heat-related records globally, surpassing 2 degrees Celsius of warming on November 17.
 - Preliminary analysis from the European Centre for Medium-Range Weather Forecasts.
- **Cascading Effects of Drought:**
 - Droughts have cascading effects, leading to dwindling reservoir levels, declining crop yields, loss of biodiversity, famines, and significant economic consequences.
 - Economic losses estimated to be in the billions of dollars annually.
- **Global Drought Vulnerability Index 2023:**
 - Several countries outside traditional drought-prone regions, including Uruguay, Niger, Djibouti, Cabo Verde, and Mauritania, declared drought emergencies.
 - Horn of Africa faced its worst drought in 40 years, impacting Ethiopia, Kenya, and Somalia.
- **Underreported Impact of Human-Induced Droughts:**
 - Massive impacts of human-induced droughts are unfolding silently, often escaping immediate public and political attention.
 - Droughts tend to go unnoticed, perpetuating a cycle of neglect.
- **Research Gap and UNCCD Initiatives:**
 - Over the last two decades, only 26% of scientific literature has measured society's influence on drought hazards' duration and intensity.
 - UNCCD emphasizes the need for more research tracing the long-term dynamics between society and drought risk.
- **Global Drought Vulnerability Statistics:**
 - 85% of people affected by droughts reside in low- or middle-income countries.
 - 98% of the 32.6 million new disaster displacements in 2022 resulted from weather-related hazards like storms, floods, and droughts.
- **International Collaboration and Alliance Launch:**
 - The report was launched at a high-level event in Dubai, along with the International Drought Resilience Alliance.
 - The alliance, led by the governments of Senegal and Spain, focuses on collaborative efforts to enhance drought resilience.

NEWS IN BETWEEN THE LINES

President's Colour Award



Recently, the President of India has presented the President's Colour to the Pune-based Armed Forces Medical College (AFMC).

About President's Colour Award:

- The President's Colour Award is the **highest honor** that can be given to a military unit, military training establishment or **state/UT Police Force** of India.
- It is awarded in recognition of **exceptional service to the nation**, both in peace and in war.
- The award is also known as "**Rashtrapati ka Nishaan**" in Hindi.
- It gained new significance on **November 23, 1950**, when the "**King's Colour**" of the British Indian regiments was retired in **Dehradun's Chetwode Hall**.
- The **Indian Navy** received the President's Colour first from **Dr. Rajendra Prasad** on **May 27, 1951**.
- Some of the states that have received the President's Colour Award including, **Uttar Pradesh Police, Delhi Police, Maharashtra Police, Jammu and Kashmir Police**, etc.
- Some of the military units that have received the President's Colour Award including **3rd Battalion of the Naga Regiment, INS Valsura and INS Dronacharya**.

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Kaziranga National Park



Recently, in Kaziranga National Park, a rhinoceros was killed using a primitive spear.

About Kaziranga National Park:

- Kaziranga National Park and Tiger Reserve is situated in the **Golaghat** and **Nagaon** districts of the northeastern state of **Assam**, India.
- It was formed in **1908** on the recommendation of **Mary Curzon** and gained **UNESCO World Heritage Site** status in **1985**.
- It was declared a **National Park** in **1974**.
- It was declared as **Tiger Reserve** in **2006**.

Flora: Kaziranga showcases four distinct types of vegetation due to variations in altitude, housing trees like **Kumbhi**, **Indian gooseberry**, cotton tree and **elephant apple**.

Fauna: Besides the **Indian rhinoceros**, the park shelters **tigers**, leopards, elephants, **gibbons**, sloth bears and a multitude of **migratory bird** species.

River: The **Diphlu River** also runs through the Kaziranga National Park in Assam.

Prevention of Terrorism Act



Recently, some individuals have been arrested by the Sri Lankan Police under the Prevention of Terrorism Act in Batticaloa.

About the Prevention of Terrorism Act (POTA):

- The Prevention of Terrorism Act (POTA) was passed by the Indian Parliament in **2002**.
- The act's objective was to strengthen anti-terrorism operations in response to the increase in terrorist attacks in India.
- The act was repealed in **2004** by UPA after concerns were raised regarding human rights violations.

Background:

- The Prevention of Terrorism Act was enacted in **1979**, during **President J.R. Jayawardene's** time in office, mainly to crush Tamil youth's armed struggle against state discrimination.
- It became a permanent law in **1982**.
- The law was also used against insurgent Sinhala youth during the second the **Janatha Vimukthi Peramuna (JVP)** uprising in the late **1980s** and more recently, against Muslims, in the wake of the **Easter Sunday terror attacks of 2019**.

Red Gold



Recently, saffron production in India, known as 'red gold,' has been dwindling due to climate change, land shortages and labour issues in Kashmir.

About the Red Gold:

- One of the **most expensive spices** in the world, saffron is also referred to as "**Red Gold**" due to its vibrant red color and immense value.
- It is derived from the **crocus flower's stigma**.
- The stigmas are typically of an orange-red colour which is due to the content of **crocetin**, a type of **acid** and **crocin**.
- It takes thousands of flowers to produce a few grams of saffron.
- Minerals are also abundant in it, including **potassium**, **manganese**, **iron**, **calcium**, **selenium**, **copper**, **zinc** and **magnesium**.
- It is also high in folic **acid**, **niacin**, riboflavin and **vitamins A and C**.

Press Mud



Recently, it has been observed that the Press mud, a byproduct of sugarcane, could generate 460,000 tonnes of compressed biogas (CBG) valued at Rs 2,484 crore.

About Press Mud:

- Press mud is a waste by-product of the **sugar industry**.
- It is also known as filter **cake**, **press cake** or **olivar cake**.
- It is the residue left after the juice clarification process.
- The main product is clear juice and the impurities settle at the bottom.
- It can also be used to **generate compressed biogas (CBG)**.
- It has many applications, including, **Fertilizers**, **Extraction of chemicals**, **Biosorbent**, **crops and horticulture**, **Animal feed**, **Manufacture of cement**, etc.

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Place in News

Malaysia

Recently, Malaysia made a significant policy change by introducing visa-free entry for Indians starting in December.

Malaysia

(Capital: Kaula Lumpur)

Location: Malaysia is situated in **Southeast Asia** and comprises **13 states** along with **three federal territories**.

Political Boundaries: Malaysia shares its land boundaries with **Thailand** and **Brunei** to the north, **Singapore** to the south and **Indonesia** to the southwest.

Physical Features:

- The major rivers in Malaysia include **Pahang**, **Sarawak**, **Rajang** and **Kinabatangan**.
- **Mount Kinabalu** stands as Malaysia's highest point, soaring to an impressive 4100 meters above sea level.
- **Bera Lake** is a natural freshwater lake system in southwest Pahang.



POINTS TO PONDER

- Where is the 30th Conference of Parties (COP30) to the United Nations Framework Convention on Climate Change (UNFCCC) scheduled to be held in 2025? - **Brazil**
- Which river is the largest tributary of the Amazon river? - **River Negro**
- Which organization is recognized as the only tripartite U.N. agency that includes government, employer, and worker representatives? - **International Labour Organization (ILO)**
- Which war saw Sam Hormusji Framji Jamshedji Manekshaw assigned to the Army Headquarters' Military Operations Directorate? - **1947-48 Kashmir War**
- What legal basis allows the Election Commission of India to issue guidelines regarding the conduct and publication of exit polls? - **Article 324 and Section 126A of the Representation of People (R.P.) Act, 1951**

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