

UPSC CURRENT AFFAIRS NOTES 18-11-2023

State of the Cryosphere 2023

Recently, the State of the Cryosphere 2023 report was released.

Cryosphere



The cryosphere is the name given to Earth's snow and ice regions and ranges from ice sheets, glaciers, snow, and permafrost to sea ice and the polar oceans – which are acidifying far more rapidly than warmer waters.

Findings of the Report

The State of the Cryosphere 2023 – Two Degrees is Too High report shows that all of the Earth's frozen parts will experience irreversible damage at 2°C of global warming, with disastrous consequences for millions of people, societies, and nature.

Confirming that just 2°C of global warming will trigger irreversible loss to Earth's ice sheets, mountain glaciers and snow, sea ice, permafrost, and polar oceans, it updates the latest science and highlights the global impacts from cryosphere loss.

Key findings in the report on the impact of 2°C of warming include:

Ice sheets: nearly all of Greenland, much of West Antarctica, and even vulnerable portions of East Antarctica will be triggered to very long-term, inexorable sea-level rise.

Glaciers: extensive, irreversible ice loss from the world's glaciers in many major river basins, with some disappearing entirely. As glaciers melt, risks of catastrophic events such as landslides, sudden ice shears, and glacial lake outburst floods increase.

Sea ice: extensive sea ice loss at both poles, with severe feedbacks to global weather and climate. By 2°C, the Arctic Ocean will be sea ice-free in summer every year, potentially for several months.

Permafrost: extensive permafrost thaw and resulting greenhouse gas emissions will cause temperatures to continue to rise, even once human emissions reach zero. At 2°C, annual total permafrost emissions (both CO₂ and methane) would total the size of the entire European Union's emissions from 2019.

Polar ocean acidification: year-round, permanent corrosive ocean acidification conditions in many regions of Earth's polar and near-polar seas. Shell-building animals, and commercial fisheries that rely on them in the food chain may not survive.

Chhath Puja

The great festival of Chhath started recently and is celebrated with great rituals and devotion.





It is an important Hindu festival celebrated in states like Bihar, Uttar Pradesh, Jharkhand, and West Bengal.

This festival is dedicated to **God Surya and his sister Shashti Devi**, often referred to as Chhathi Maiya, and it involves religious rituals.

The most unique feature of this Chhath Puja is that there is no Murti Puja or Idol Worshipping, unlike most of the festivals of the Hindu religion.

The festival is celebrated in October or November, after Diwali.

The Chhath festival begins as the Diwali festival ends.

It is celebrated for four consecutive days and is celebrated with great reverence and dedication.

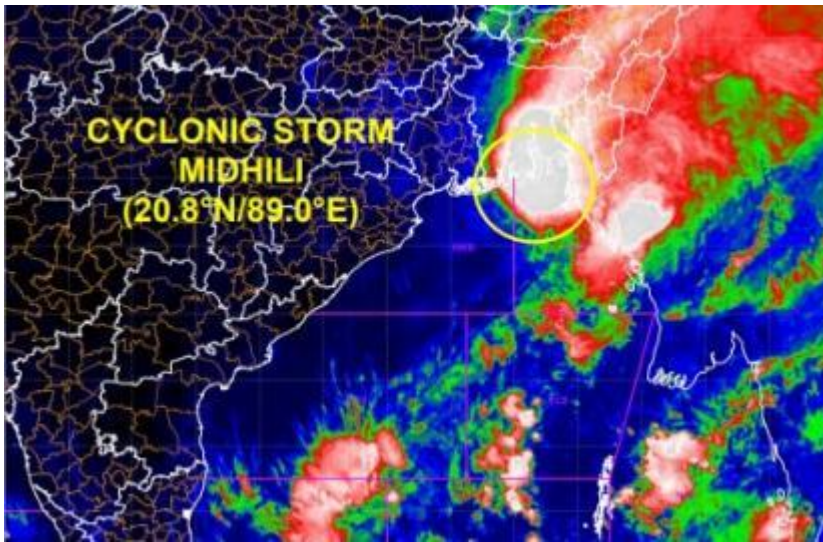
The first day of the Chhath Puja includes taking a dip in the holy river/any water body. People also take the Ganges water to their homes to perform special offerings and rituals. Houses are thoroughly cleaned on this day.

The second day of Chhath, also known as Kharna, involves devotees observing a day-long fast, which is broken in the late evening after performing the worship of Mother Earth. The offerings to God include rice pudding (kheer) and fruits, which is distributed among family members and friends.

The third day of Chhath goes into the preparation of the prasad (offerings) for the evening offerings, also known as Sanjhiya Arghya. In the evening, large numbers of devotees gather on the banks of rivers and make offerings (Arghya) to the setting sun. The night of the third day witnesses a colourful event known as Kosi. A canopy is made from sugarcane sticks, and lighted earthen lamps are placed inside the canopy along with baskets filled with prasad.

On the fourth and final day of Chhath, family members and friends go to the banks of rivers before sunrise and make offerings (Arghya) to the rising sun. After this ritual, devotees break their fast and distribute Prasad to neighbours and relatives.

Cyclone Midhili



The Indian Meteorological Department (IMD) declared about the development of Cyclone Midhili in the northwest Bay of Bengal.

Under the influence of Cyclone Midhili, heavy rainfall is forecasted in the coastal regions of Odisha, West Bengal, Tripura, and Mizoram with wind speed blowing in the range between 40 kmph and 70 kmph.

Cyclones

A cyclone is defined as a rapid inward air circulation in and around a low-pressure (LP) area.

They are limited to the atmosphere between 30° N and 30° S latitudes.

India's Cyclones: Tropical cyclones form in the North Indian Ocean during the pre-monsoon (April-June) and post-monsoon (October-December)

Conditions for the formation of a tropical cyclone:

A large and constant supply of warm and moist air is required for the creation of a tropical cyclone.

Strong Coriolis force that can prevent low pressure at the centre from filling.

Unstable condition that causes local disruptions.



There is no strong vertical wind wedge to interfere with the vertical transmission of latent heat.

Formation of cyclones:

Tropical cyclones form only over warm ocean waters near the equator.

To form a cyclone, warm, moist air over the ocean rises upward from near the surface.

As this air moves up and away from the ocean surface, it leaves less air near the surface. So basically, as the warm air rises, it causes an area of lower air pressure below.

Air from surrounding areas with higher air pressure pushes into the low-pressure area. Then this new “cool” air becomes warm and moist and rises, too. And the cycle continues.

As the warmed, moist air rises and cools the water in the air forms clouds.

The whole system of clouds and wind spins and grows, fed by the ocean’s heat and water evaporating from the ocean surface.

As the storm system rotates faster and faster, an eye forms in the center.

It is very calm and clear in the eye, with very low air pressure. Higher-pressure air from above flows down into the eye.

When the winds in the rotating storm reach 39 mph (63 kph), the storm is called a “tropical storm”.

And when the wind speeds reach 74 mph (119 kph), the storm is officially a “tropical cyclone”.

Tropical cyclones usually weaken when they hit land because they are no longer being “fed” by the energy from the warm ocean waters.

However, they often move far inland, dumping many centimeters of rain and causing lots of wind damage before they die out completely.

The name ‘Midhili’ was given by the



Types of Cyclones

Cyclones in the North Indian Ocean are typically categorized into various types based on their characteristics.

Understanding these distinctions is crucial for preparedness and mitigation efforts.

Tropical Cyclones

Tropical cyclones, often referred to as hurricanes or typhoons in other parts of the world, are one of the most destructive types of cyclones.

They are characterized by strong winds exceeding 74 miles per hour (119 kilometers per hour) and heavy rainfall.

The North Indian Ocean witnesses its share of tropical cyclones, which could result in widespread devastation.

Severe Cyclonic Storms

Severe cyclonic storms are at the next level of intensity.

These storms have even stronger winds and more significant potential for destruction.

They often lead to storm surges, which can inundate coastal areas, causing severe flooding.

Exclusive Economic Zone (EEZ)

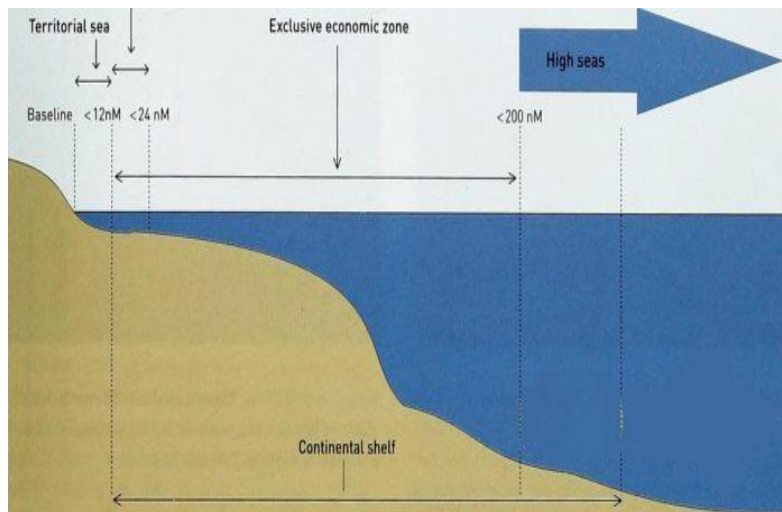
Australian naval personnel allegedly sustained minor injuries recently after “unsafe and unprofessional” conduct by a Chinese warship in international waters off Japan’s Exclusive Economic Zone (EEZ).

About Exclusive Economic Zone (EEZ):

The concept of an exclusive economic zone (EEZ) was adopted through the 1982 United Nations Convention on the Law of the Sea (UNCLOS).

EEZ, as defined under UNCLOS, is an area of the ocean extending up to 200 nautical miles (370 km) immediately offshore from a country's land coast in which that country retains exclusive rights to the exploration and exploitation of natural resources.

Under international law, within its defined EEZ, a coastal nation has:



Sovereign rights for the purpose of exploring, exploiting, conserving, and managing the natural resources of the seabed, subsoil, and waters above it.

Jurisdiction is provided for in international law with regard to the establishment and use of artificial islands, installations, and structures; marine scientific research; and the protection and preservation of the marine environment.

Other rights and duties are provided for under international law.

Other States have the right for their ships and aircraft to traverse the EEZ and its airspace and to lay cable and pipelines.

What is the Territorial Sea?

The territorial sea extends to a limit of 12 nautical miles from the baseline of a coastal State.

Within this zone, the coastal State exercises full sovereignty over the air space above the sea and over the seabed and subsoil.

A coastal State may legislate on matters concerning the safety of navigation, the preservation of the environment, and the prevention, reduction, and control of pollution without any obligation to make these rules compliant with international standards.

Resource use within the territorial sea is strictly reserved for the coastal State.

Proposed India-UK Free Trade Agreement (FTA)

The External Affairs Minister (EAM) of India discussed the India-UK Free Trade Agreement (FTA) with Britain's PM and Foreign Secretary.



This round of talks comes amid the bilateral trade between India and the U.K. increased to \$20.36 billion in 2022-23 from \$17.5 billion in 2021-22.

Merchandise trade: Indian products like petroleum, medicines, diamonds, machine parts, aeroplanes, and wooden furniture worth \$6 billion face no tariffs in the UK, even without the FTA. These will not gain from the FTA.

Services:

An area of immediate advantage for India is persuading the UK to issue priority visas to Indian professionals travelling to the UK to perform short-term assignments.



However, obtaining a large number of short-duration business visas from the UK may not be easy, as the UK erroneously associates visas with immigration, a sensitive issue since Brexit.

Rules of origin:

This will ensure that products from third countries only receive FTA benefits if they undergo significant transformation in the exporting country.

India prefers conservative rules of origin compared to most developed countries, leading to extended discussions and negotiations.

Government procurement

Allowing the UK producers to sell to India's government procurement sector would bring them on par with Indian firms.

On the other hand, Indian firms face a competitive and restricted government procurement market in the UK with little business prospects. India needs to be conservative and careful.

Labour standards, gender, environment, digital trade, IPRs: India must make domestic rules/standards before taking commitments under the FTAs. Till then, India must avoid taking onerous obligations on non-trade issues.

Significance of the India-UK FTA:

When signed, the India-UK FTA will serve as a template for an agreement with India's 2nd-largest trade partner, the European Union (EU).

Breaking from the look east policy for trade deals that saw widening deficits with Japan, South Korea, and ASEAN countries, the government is counting on economic integration with Western and African nations to fuel export growth.

What has Spurred the India-UK FTA?

The China factor:

The disruption of supply chains during the pandemic brought home to Western companies the risks of over-dependence on China, and the need for a 'China-plus one' policy.



Australia's tensions with China, along with the complementarities with the Indian economy, presented a case for a trade deal with India; similar factors brought New Delhi and London to the negotiating table.

India exiting from Regional Comprehensive Economic Partnership (RCEP): India, after exiting the China-dominated RCEP, has been looking at trade deals with the UK, Australia, the EU, to hold off China in the region.

Spurred by Brexit: A trade deal with India is crucial for the UK as the ruling Conservatives face a tough election in early 2025.

What will India and the UK Gain from the India-UK FTA?

India:

India's labour-intensive sectors such as apparel and gems and jewellery have seen a steep decline in market share over the last five years.

Indian textile exports face tariffs as high as 10% in the UK; a trade deal could put India on par with competition such as Bangladesh, and revive textile exports.

UK:

Notably, the average tariff on goods imported from India into the UK is 4.2% but the average tariff in India on goods imported from the UK is 14.6%

British exports to India such as cars, Scotch whisky, and wines, face considerable tariffs of 100-150%.

Tariff reductions on these goods will potentially offer UK deeper access into Indian markets.

Challenges in the India-UK FTA:

Elimination of duty does not automatically result in export growth: Past deals with Japan and the ASEAN countries have shown that. Also, many Indian exports to the UK already enjoy low or zero tariffs.



Warning from the British Parliament: Granting zero-duty access to Indian textiles under the FTA could bring stress on Least Developed Countries such as Bangladesh.

Non-tariff barriers (NTBs):

Modern FTAs go beyond tariff reduction. India could use the negotiations to eliminate NTBs that have historically been a concern for exporters, especially for agri exports.

NTBs often come in the form of regulations, standards, testing, certification, or pre shipment inspection that are aimed at protecting human, animal, or plant health and the environment.

Issue of carbon tax:

Like the EU, the UK is looking to impose a levy on metal imports based on carbon emissions.

An EU-style carbon border adjustment mechanism (CBAM) will hurt India's exports to the UK even if India wins significant removal of tariffs.

Yellow-spotted Amazon River turtle

In the Peruvian Amazon, an extended heat wave and drought have shortened the incubation period for thousands of yellow-spotted Amazon River turtle hatchlings released into the river by biologists as part of a local environmental program.

About Yellow-spotted Amazon River turtle:



It is also known as the side-necked turtle, which cannot retract its head into its shell.

Hatchlings have very obvious yellow spots on their heads, which shrink as they grow.

It has brown or olive-coloured shells and is known for its distinctive yellow spots and black scales.

Males keep some of the yellow spotting; females lose their spots altogether.

Native Habitat

These are native to the Amazon River basin and can be found in the Amazon and Orinoco river systems in Venezuela, eastern Colombia, eastern Ecuador, northeastern Peru, the Guianas, Brazil, and northern Bolivia.

These turtles spend time basking along the riverbanks and in the calm waters of big rivers and streams.

They avoid fast-moving waters.

They are omnivorous, feeding on both vegetation and small animals.

Conservation status

IUCN: Vulnerable