# Concerns of Rising Sea Level

## Why in news?

World Meteorological Organization's (WMO) State of the Global Climate 2022 report highlighted that the world's sea level is rising at an unprecedented rate.

## How much is the sea rising?

- The rate of global mean sea-level (GSML) rise has doubled between the first decade of the satellite record and the last.

  *To calculate the rate of change in the GSML, i.e. how fast or slow the sea level is changing, we can calculate the difference in the GSML across a few years, usually a decade, and then divide the difference by the number of years.*

- The sea level has been rising in the last 3 decades.
- The rate of sea-level rise was 2.27 mm/year in 1993-2002, it shot up to 4.62 mm/year in 2013-2022.

## What causes accelerated sea-level rise?

- Thermal expansion due to increasing ocean temperatures.
- Ocean warming the phenomenon of rising mean ocean temperatures contributed 55% to GSML rise.
- According to the State of the Global Climate 2022 report in 2005-2019, loss of glaciers and ice sheets contributed 36% to the GSML rise.
- Changes in the storage of land water contributed less than 10% to GSML rise.
- Thinning of cryosphere leading to melting of glaciers.

  *The cryosphere includes the Arctic and Antarctic regions, seasonal snow cover, and permafrost (mass of land that remains below 0º C for at least 2 straight years).*

- Increasing concentrations of carbon dioxide and other greenhouse gases.

## What are the impacts of sea level rise?

- **Groundwater crisis** - It allows the salt water to enter underground making the underground water salty.
- **Coastal areas** - It affects the coastal areas by swallowing the land
- **Migration** - People in coastal areas gets migrated due to increasing sea level rise.
- **Land cover** - May be decreased leading to population density
- Acute shortage of land for human use.
- **Cyclones** - The chances of cyclones could increase, affecting coastal communities and leading to large economic liabilities to tropical countries.
- **Disintegrate the coastal communities** - People on the coastal ecosystem may be affected and push them to poverty and force them to migrate.

## Quick facts

| World Meteorological Organization (WMO) |
| --- |
| • WMO is an intergovernmental organization with a membership of ***193 Member*** States and Territories.<br>• WMO originated from the International Meteorological Organization (IMO), the roots of which were planted at the 1873 ***Vienna International Meteorological Congress.***<br>• WMO is ***specialized agency*** of the United Nations for meteorology (weather and climate), operational hydrology and related geophysical sciences.<br>• WMO's Its supreme body is the ***World Meteorological Congress***. |

### References


1. The Hindu | Sea Level Rise



SHANKAR IAS PARLIAMENT
Information is Empowering