

## **Prelim Bits 05-02-2023 & 06-02-2023 | UPSC Daily Current Affairs**

### **Operation Sadbhavana**

*The Indian Army has launched Operation Sadbhavana in Ladakh with the aim of supporting children in remote areas of Ladakh.*

- Operation SADBHAVANA (Goodwill) is a unique humane initiative undertaken by Indian Army to address aspirations of people affected by scourge of terrorism.
- It was first started in the State of Jammu & Kashmir and now launched in Ladakh.
- The focus of Operation Sadbhavana is to improve the overall core social indices with simultaneous thrust on capacity building.
- **Focus Area** - education, women & youth empowerment, health care, infrastructure development and community development projects.
- **Activities** - As part of the operation, Indian Army is undertaking multiple welfare activities in remote areas of UT of Ladakh.
- Indian Army is presently running seven (07) Army Goodwill Schools (AGS) under this operation in Ladakh Region.
- 17 Infrastructure projects have been allotted and planned in all districts of UT of Ladakh in financial year 2022-23.
- Establishment of computer lab; construction of Captain Manoj Pandey PVC Stadium/Sports Complex; construction of community halls etc. are also included.

### **References**

1. [PIB - Operation Sadbhavana In Ladakh](#)
2. [India Today - Indian Army launches 'Operation Sadbhavana'](#)

### **NISAR Satellite**

*The NASA handed over the payload for the NISAR satellite to Indian Space Research Organisation (ISRO).*

- NISAR is a jointly built Synthetic aperture radar (SAR) by NASA and the Indian Space Research Organisation (ISRO).
- NISAR will be the first radar of its kind in space to systematically map Earth, using 2 different radar frequencies.
- NISAR's two radar systems
  1. The L-band SAR provided by JPL.
  2. The S-band SAR built by ISRO.
- Synthetic aperture radar (SAR) refers to a technique for producing fine-resolution images from a resolution-limited radar system.

- **Functions** - NISAR provides information about biomass, natural hazards, sea level rise, and groundwater.
- NISAR monitors resources such as water, forests and agriculture and measure changes in earth surface less than a centimeter across.
- It is expected to be launched from Satish Dhawan Space Centre in Andhra Pradesh state in 2024.

## References

1. [The Hindu - NISAR satellite ready to be shipped to India](#)
2. [Hindustan Times - NASA hands over payload of NISAR to ISRO](#)
3. [NASA - ISRO SAR](#)

## 3rd Khelo India Winter Games

*The Union minister of Youth Affairs and Sports launched the mascot, theme song, and jersey of the third edition of Khelo India Winter Games.*

- The games that will take place in Gulmarg in Jammu and Kashmir.
- The winter games will be played across 9 sports events.
- The Khelo India Winter Games started in 2020.
- It is supported by the Ministry of Youth Affairs and Sports.
- It is organized by the J&K Sports Council as well as the Winter Games association of the J&K.
- Jammu and Kashmir have come on top in both editions of the games so far.
- **Mascot** - This year's mascot is the [Snow Leopard](#) which depicts the vibrant heritage of the Himalayas.
- It also reiterates the administration's commitment towards their conservation.

## References

1. [PIB - Khelo India Winter Games](#)
2. [The Hindu - Mascot, theme song of 3rd Khelo India Winter Games](#)

## Visva-Bharati University

*Visva-Bharati University will soon get the 'heritage' tag from UNESCO to take the distinction of world's first living heritage university.*

- Visva-Bharati University was founded by Rabindranath Tagore in 1921, located in Santiniketan, West Bengal.
- Rabindranath believed in open-air education and introduced that system at the university, which prevails to date.
- He donated some of his property, including land and a bungalow, to the society.
- When founded, it was named after Rabindranath Tagore until Visva-Bharati Society was registered as an organisation in May 1922.
- Until Independence, it was a college (1921 - 1947).

- In 1951, the institution was given the status of Central University and 'An Institution of National Importance' by an Act of Parliament.
- Its first vice-chancellor was Rathindranath Tagore, the son of Rabindranath Tagore.
- The second vice-chancellor was grandfather of Nobel Laureate economist Amartya Sen.
- The Prime Minister of India acts as the Chancellor and the President Appoints Vice-Chancellor of the university.

## References

1. [IE - Visva-Bharati world's first living Heritage University](#)

## Ocean Carbon Dioxide Removal

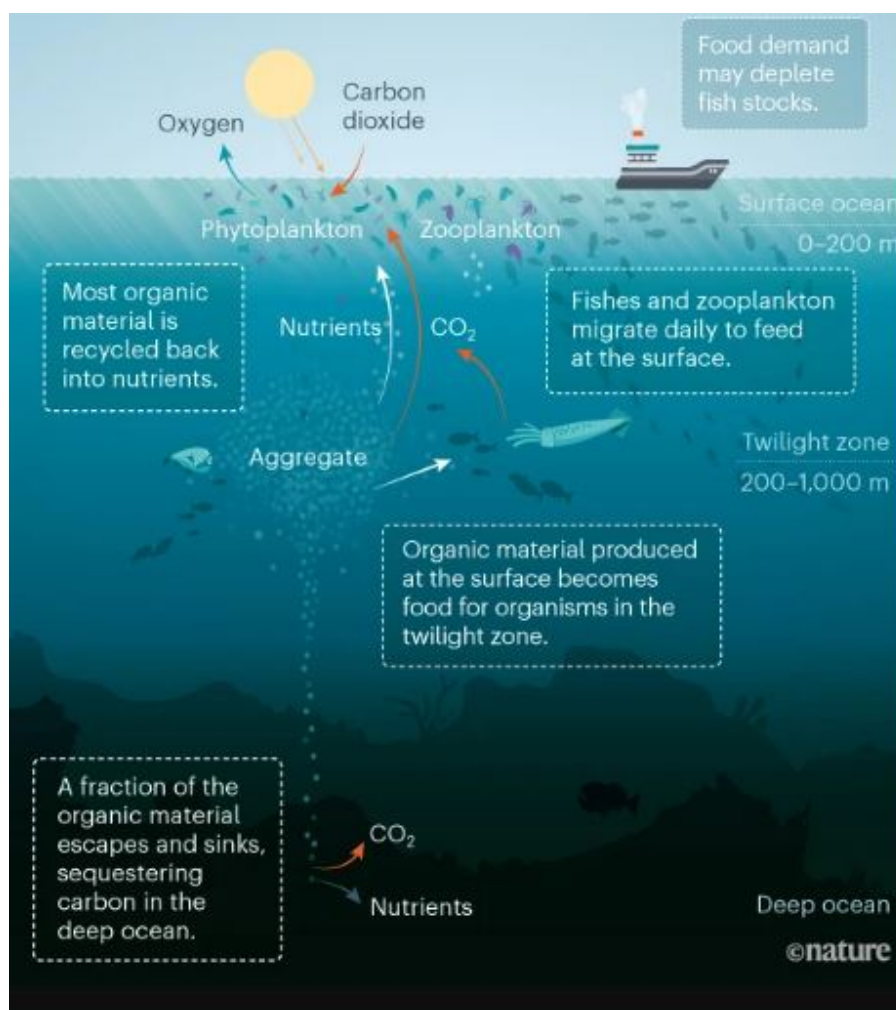
*The ocean twilight zone could store vast amounts of carbon captured from the atmosphere which might help to slow climate change.*

*The ocean has about 50 times more carbon than the atmosphere.*

- Ocean carbon dioxide removal (ocean CDR) is a method which uses the ocean's natural ability to take up carbon on a large scale and amplifies it.
- Carbon gets into the ocean from the atmosphere in two ways.
- **First Method** - Air dissolves into the ocean surface.
- Winds and crashing waves mix it into the upper half-mile of slightly alkaline seawater.
- The carbon dioxide is absorbed into the ocean.
- **Second Method** - It involves the biologic pump.
- The ocean is a living medium consisting of algae and fish and whales.
- When an organic material is eaten or dies, it rains down to ocean twilight zone.
- Removing carbon dioxide from the atmosphere is a necessary pathway to keep global warming under 1.5 degrees Celsius.
- The ocean's natural ability to take up more carbon can be enhanced in 3 methods to achieve this.
  1. Enhancing ocean alkalinity.
  2. Adding micronutrients to the surface ocean.
  3. Growing [kelp](#) in the ocean.
- **Ocean Twilight Zone** - This zone is a level around 650 to 3300 feet (roughly 200 to 1,000 meters) deep in the ocean.
- The ocean twilight zone sustains biologic activity in the oceans.
- It is the "'oil' of the ocean where organic carbon and nutrients accumulate and are recycled by microbes.
- It is also home to the largest animal migration on the planet.
- Each day trillions of fish and other organisms migrate from the depths to the surface to feed on plankton and one another, and go back down.
- The fishes and other organisms act like a large carbon pump and captures carbon from the surface and shunts it down into the deep oceans.

*In 2023, an experiment in the North Atlantic called the Ocean Twilight Zone Project will*

*be conducted to image the larger functioning of the ocean over a big piece of real estate at the scale at which ocean processes actually work.*



## References

1. [The Hindu - The ocean twilight zone to store carbon captured](#)