

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

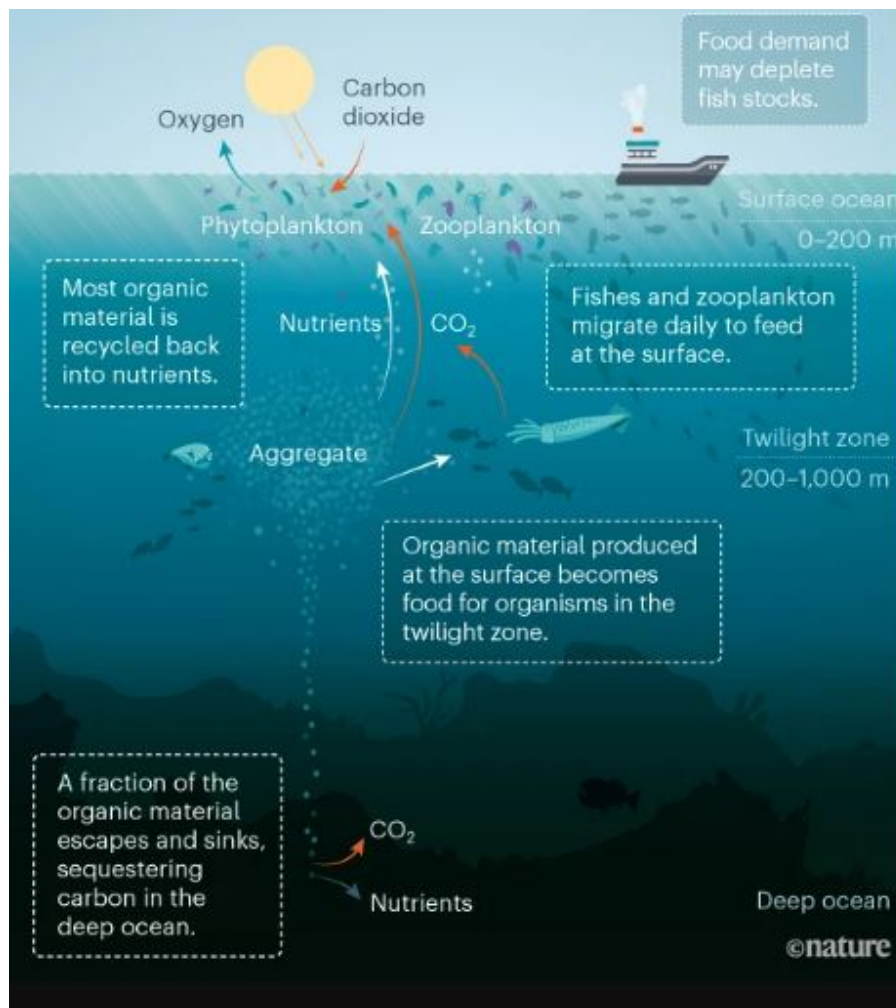
The ocean twilight zone could store vast amounts of carbon captured from the atmosphere which might help to slow climate change.

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](#)