Blue Tide

November 27, 2020

In news

The phenomena of blue tide was spotted along Juhu, Devgad and Ratnagiri beaches of Maharashtra

What is it and how does blue tide occur?

- According to the researchers it occurs when phytoplankton (microscopic marine plants), commonly known as dinoflagellates, produce light through chemical reactions in protein.
- Waves disturb these unicellular microorganisms and makes them release blue light, they added
- The phenomenon called 'blue tide', when bioluminescent marine life makes the sea appear a deep shade of blue

What is bioluminescence ?

- Bioluminescence is the production and emission of light by a living organism. It is a form of chemiluminescence
- It is found in many marine organisms: bacteria, algae, jellyfish, worms, crustaceans, sea stars, fish, and sharks to name just a few.
- Most deep-sea animals produce some bioluminescent light, but the phenomenon isn't relegated to the deep: one of the most common sightings occurs at the surface of the ocean.
- Many small planktonic surface dwellers—such as single-celled dinoflagellates—are bioluminescent.

Reasons for blue tide

According to marine experts, high temperature, high quantity of organic material, such as sewage and effluents and increased turbulence/wave action of the water, could be one of the reasons behind the blue tide.

Blue tide in India and other parts of the world

- Blue tide was spotted at Juhu, Devgad and Velas beaches in Ratnagiri. Across
- India’s coast, the spectacle has been witnessed from November to January and, in some instances, even in March.
- Recently, the ‘blue tide’ was witnessed along Dakshina Kannada-Udupi coast.
- This phenomena has been observed in many beaches across the world, such as Maldives, Vietnam, Indonesia, USA, and Australia.