

# Blue Tide

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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.