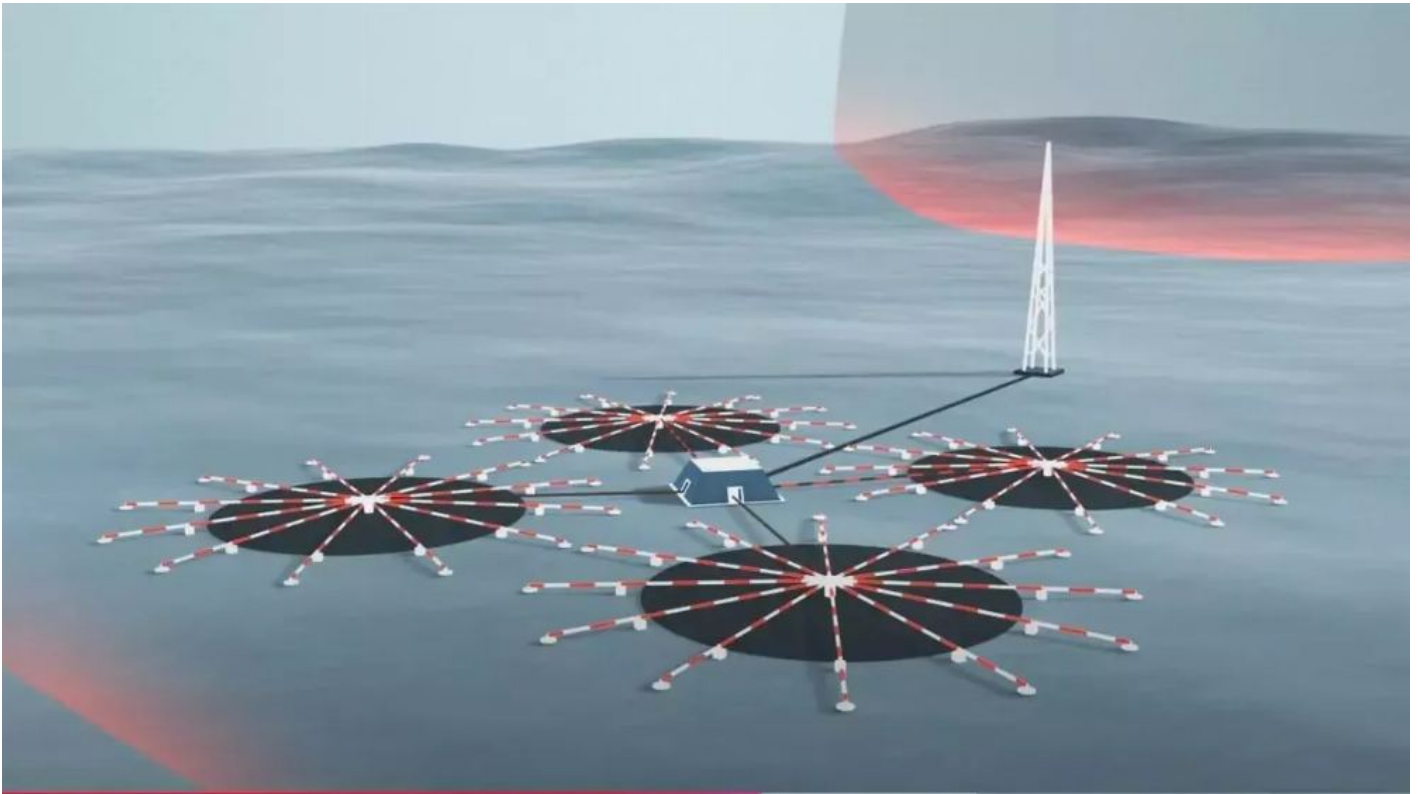


What is Infrasound?

September 26, 2024 • vajiramandravi.com



About Infrasound:

- It refers to sound waves with **very low frequencies**, in contrast to the more ubiquitous ultrasound.
- It can be produced by a passing **meteor, a storm, an aurora up north, volcanoes, earthquakes** or even nuclear explosions.
- Infrasonic waves can **cause minute changes in the atmospheric pressure**, which can be measured by microbarometers.
- These noiseless sounds **can travel very long distances** without losing steam — a property that CTBTO finds useful for detecting distant nuclear explosions.
- The CTBTO's **International Monitoring System (IMS)** uses a range of technologies to detect nuclear explosions. Its Infrasound Network (that is being built) is the only global monitoring network of its kind, with plans to build a network of 60 array stations in 35 countries.
- **Applications of Infrasound**
 - It can be used to check the **structural health of buildings**, dams or bridges — because infrasonic waves can pass through dense materials and reveal internal stress, cracks or other defects.
 - In the **field of aerospace**, low-frequency sounds generated during a rocket's lift-off can cue the stress and behaviour of a rocket, or detect aerodynamic instabilities of an aircraft.

- **In mining**, infrasound can help check the integrity of mine shafts or determine whether a dynamite blast was successful.
 - This sound has also been used in **wildlife tracking**, such as monitoring the movement of whales.
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Q1: What is Comprehensive Nuclear Test Ban Treaty (CTBT)?

The Comprehensive Test Ban Treaty prohibits “any nuclear weapon test explosion or any other nuclear explosion” anywhere in the world. The treaty was opened for signature in September 1996, and has been signed by 187 nations and ratified by 178. The treaty cannot formally enter into force until it is ratified by 44 specific nations, eight of which have yet to do so: India, China, Pakistan, North Korea, Israel, Iran, Egypt, and the United States.

Source: [Sound Science. CTBTO tunes into infrasound](#)

Source: <https://vajiramandravi.com/current-affairs/infrasound/>

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