

# Call to explore sound based technology to track marine mammals



Monitoring whales and dolphins by capturing their sounds even from several kilometres away could be the next major development in India's marine mammal research. A session on marine mammal research held on the sidelines of the fourth International

Symposium on Marine Ecosystem 'MECOS4' at ICAR-Central Marine Fisheries Research Institute (CMFRI) discussed the growing use of Passive Acoustic Monitoring (PAM), a sound-based technology to track marine mammals effectively.

Experts say that sound travels much faster and farther underwater than light, making acoustic monitoring an ideal tool to detect and study marine life even in challenging oceanic conditions. Unlike visual surveys that depend on clear weather and daylight, PAM offers round-the-clock monitoring across vast ocean stretches. The technology uses various systems such as bottom-mounted moorings, surface buoys, drifting buoys, towed arrays, and even acoustic tags attached to individual animals, said Divya Panicker of Ashoka University.

These devices capture underwater sounds produced by marine mammals, helping researchers determine their presence, abundance, and distribution patterns. By analysing these sound signals, scientists can even trace migration routes and behavioural patterns of species, she said, adding that integrating AI and ML could further enhance the accuracy of species identification and classification. With India's vast coastline and rich marine biodiversity, developing indigenous acoustic systems could revolutionise marine mammal conservation, the meet observed.