

# Sonification project of NASA

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**In news-** NASA is adding another layer of experience to the images gathered by the James Webb Space Telescope (JWST) through the sonification of the images and data captured

## **What is Sonification?**

Sonification is the **process that translates data into sound**. Elements of the image, like brightness and position, are assigned pitches and volumes. Each translation below begins on the left side of the image and moves to the right.

## **About the project-**

- NASA's **goal is to make Webb's images and data understandable through sound** – helping listeners create their own mental images. Its **first example is that of the Cosmic Cliffs in the Carina Nebula**.
- JWST captured a stunning image of the **Carina Nebula, which is 7,600 light years away**. The JWST image is far clearer than any image captured previously.
- A second example of sonification is that of exoplanet WASP-96 b. JWST observed the atmospheric characteristics of the gaseous exoplanet, which shows clear signatures of water.
- **NASA believes that visually-impaired people will benefit the most from this sonification project.**
- Similar to how written descriptions are unique translations of visual images, sonification also translates the visual images by encoding information, like colour, brightness, star locations, or water absorption signatures, as sounds.

## **Note:**

- The Carina Nebula or Eta Carinae Nebula is a large, complex area of bright and dark nebulosity in the constellation Carina, located in the Carina–Sagittarius Arm of the Milky Way galaxy.
- NASA's James Webb telescope has been able to peer deeper into a dusty nebula (Tarantula Nebula) that hosts a cluster of newly forming stars
- The Tarantula Nebula– or the 30 Doradus– is a stellar nursery situated in the Large Magellanic Cloud galaxy 1,61,000 light years away.
- Stretching across 340 light years, the nebula is the largest and the brightest star-forming region in the Local group that includes our galaxy, the Milky Way.
- Named for its filaments of dust that looked like spider silk in previous images, the Tarantula Nebula was viewed by the Webb telescope through different instruments to glean a clearer picture of the heart of the nebula.