

Perseverance Rover

February 20, 2021

In news : Recently, NASA released the first image of Mars taken by its Perseverance rover

Key updates

- Less than 24 hours after NASA's science rover Perseverance landed on Mars, the United States space agency released a number of colourful images of the Red Planet.
- The perseverance rover, which is the most advanced astrobiology laboratory ever sent to another world, safely landed on the Martian surface recently
- Touching down near an ancient river delta, the rover will search for traces of ancient life and will gather the most vital rock samples for a possible return to Earth
- The spacecraft has been equipped with a record 25 cameras and two microphones.
- Several of these cameras were turned on during the rover's descent to the planet, thereby capturing striking images which show phenomenal details of the rover's landing till about 2 meters off the ground
- The landing photo was taken by a camera placed on the "sky crane" descent-stage, just above the rover
- The images were snapped during the crucial last minutes of the rover's descent, also referred to as the "seven minutes of terror", when it was travelling at 12,000 miles per hour.

About Perseverance Rover

- **Mission name:** It is part of the mission Mars 2020
- **Launch:** July 2020
- **Landing:** February 18 2020
- The Mars 2020/Perseverance rover is designed **to better**

understand the geology of Mars and seek signs of ancient life.

Key objectives

- Explore a geologically diverse landing site
- Assess ancient habitability
- Seek signs of ancient life, particularly in special rocks known to preserve signs of life over time
- Gather rock and soil samples that could be returned to Earth by a future NASA mission
- Demonstrate technology for future robotic and human exploration

Mars Helicopter

- The Mars Helicopter is a technology demonstration, hitching a ride on the Perseverance rover.
- Strapped to the rover's belly for the journey to Mars is a technology demonstration – the Mars Helicopter, Ingenuity, may achieve a “Wright Brothers moment “ by testing the first powered flight on the Red Planet.

Mission Mars 2020

Mars 2020 is a Mars rover mission by NASA's Mars Exploration Program that includes the rover Perseverance and the small robotic helicopter Ingenuity.

Purpose of Mars 2020

The mission of the Mars 2020 Perseverance rover **focuses on surface-based studies of the Martian environment**, seeking preserved signs of biosignatures in rock samples that formed in ancient Martian environments with conditions that might have been favorable to microbial life.