

ISRO's Earth Observing Satellite: EOS - 01

EOS-01 is an Earth Observing Satellite launched by ISRO in November 2020. The satellite will be launched along with nine other international satellites.

Given below are the basic facts and details about the EOS-01 satellite and mission:

ISRO's EOS-01 - Earth Observing Satellite	
Mission Type	Earth observing & Radar imaging
Operator	Indian Space Research Organisation (ISRO)
Launch Date	November 7, 2020
Launch Rocket	PSLV C-49
Launch Site	Satish Dhawan Space Centre, Sriharikota, Andhra Pradesh

About the EOS-01 Satellite

- It is an Earth observing satellite and shall play a crucial part in applications under agriculture, disaster management, and forestry support
- The EOS-01 satellite is ISRO's first space mission during the COVID-19 pandemic
- The mission was estimated to take off in the beginning of 2020 but got delayed due to the pandemic situation across the globe, the mission got delayed
- The satellite is all set to be launched in ISRO's Polar Satellite Launch Vehicle (PSLV C49)
- It is the 51st mission of ISRO which will be launched in PSLV
- It is being launched with 9 other International Satellites which shall be launched as a part of commercial agreement with the New Space India Limited (NSIL), Department of Space
- The satellite is equipped with the best quality remote sensing technology

Aspirants willing to know more about the other Indian and International Space Missions, can refer to the links given below:

JAXA's Hayabusa 2	Mars Orbiter Mission (MoM)
Juno Mission	OSIRIS-REx Mission
Bhaskara I Satellite	Chandrayaan-II Mission

What is an Earth Observing Satellite?

- A satellite which through space sends signals to Earth and monitors the changes which occur on the Earth's surface is called an Earth Observing Satellite (EOS).
- These satellites can only be used for non-military purposes and mainly for environmental benefits
- The first EOS which was launched by ISRO was in the year 1988 and was named IRS-1A
- Currently there are seventeen such remote sensing Indian satellites present on the orbit. Thirteen of which are in Sun-synchronous orbit and the rest four are in Geostationary orbit
- Few of the important Earth Observing Satellites include: RISAT-2BR1, Cartosat Series, SCATSAT-1, INSAT-3D, IMS, Bhaskara-I, and Bhaskara-II

Another important Earth Observing Satellite is to be launched by NASA and ISRO tentatively in 2022. The mission has been named [NASA-ISRO Synthetic Aperture Radar \(NISAR\)](#) and is believed to be one of the most expensive Earth-imaging satellites.

For the latest developments in the various Indian and Internal sectors, visit the [Comprehensive News Analysis](#) page.

About Polar Satellite Launch Vehicle (PSLV)

The EOS-01 will be launched by ISRO in the PSLV C49 rocket. It has been responsible for carrying many other important satellites into space and successfully completing the Indian space missions.

Given below are a few important points about PSLV:

- It is a third generation launch vehicle of India and the first to be equipped with liquid stages
- The first flight it took was in 1993, which was unsuccessful. But in October 1994, it took its first successful flight, after which is considered to be ISRO'S most reliable workhorse launch vehicle
- The PSLV launch vehicle has been the cause of success for other important ISRO missions, including [Chandrayaan-I](#) and Mars Orbiter Mission

Other launch vehicles with ISRO include Geosynchronous Satellite Launch Vehicle (GSLV).

Although this topic is important for all Government exam candidates, it is extremely important for candidates preparing for the IAS exam. Thus, aspirants preparing for the Civil Services exam can get the best [Science and Technology UPSC Notes](#) at the linked article.

About New Space India Limited (NSIL)

As discussed above, there are nine customer international satellites which are being launched along with EOS-01. These satellites are being launched as per the commercial agreement with New Space India Limited (NSIL), under the Department of Space.

Given below are important facts and pointers related to NSIL and its functions:

- New Space India Limited (NSIL) was incorporated on March 6, 2019, as announced in the Union Budget of 2019
- The organisation is a completely Government owned company and is registered under the Companies Act, 2013. The organisation has been set under the administrative control of Department of Space (DOS)
- Its main objective is to enable Indian industries to take up high technology space related activities and promote the technologies developed by the Indian Space Research Organisation
- The main business areas include:
 - Introduction of PSLV and Small Satellite Launch Vehicle (SSLV)
 - Production and marketing of space-based services and applications
 - Building of communication and Earth observation satellites
 - Transfer of technology developments in the Department of Space and ISRO centers
 - Marketing of spin off technology and consultancy services

Other Related Links	
Daily Current Affairs	UPSC Mains GS III Paper Structure and Syllabus
Topic-wise GS III Questions for UPSC Mains	List of Space Centers and Indian Space Agencies
UPSC Mains Science & Technology Questions GS III	List of Indian Satellites