Climate Change and Circling Trash

Why in news?

Researchers at the Massachusetts Institute of Technology in a new study finds that Climate change will soon be making a mess in orbit around the planet.

- **Global Warming** – Burning of coal, oil and gas reduce the space available for satellites in the ***Low Earth orbit (LEO)*.**
- By the end of the century almost *82% of the space* will be reduced because of carbon emissions.
- **Greenhouse Effect** – Along with warming of air near earth's surface it simultaneously *cools the upper parts of the atmosphere*.
- This makes the upper atmosphere *less dense* which reduces the drags of the debris present.
- **Atmospheric Drag** – *Known as Air resistance*, this drag pulls the space junks down to the earth by burning it.
- But having reduced drag effect makes less space cleaning making the atmosphere more crowded with satellites and space debris.
- **Natural cleaner** – Atmosphere is the natural cleaner to clean up the debris as there is no other way as there are million pieces of it.
- **Circling Trash** – According to the Aerospace Corporation, circling earth is home to millions of space debris which travels at the speed of a bullet and has the power of a crashing bus.
- **Satellites Records** - According to the tracking website orbit.ing-now.com, there are *11,905 satellites circling Earth, 7,356* in the LEO.
- **Decreasing Density** - The density at *250 miles (400 kilometers)* above Earth is decreasing by *about 2% a decade* and is likely to get intensify because of the Greenhouse Gas Effect, according to British Antarctic Survey.
- **NASA Records –** Shows that there is measurable reduction of drag, realizing climate change component is really important.

Reference

The Hindu | Climate change and Circling debris