U.S. Order on Commercialising Outer Space

Why in news?

US President Donald Trump has signed an executive order that allows private citizens and companies to own and exploit natural resources on celestial bodies like the moon, Mars, comets, and asteroids.

What is the existing arrangement?

- The key international agreement on activities in space is the "Outer Space Treaty" or OST.
- It is formally called the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies.
- This was drafted in 1967 and was signed by the US, the USSR, and the UK.
- It has been since signed and ratified by 100-odd nations, and signed but not yet ratified by many others.
- Every major space power, including China, Japan, India, and France, is a signatory to this.

What led to the OST?

- The OST was drafted during the Cold War when the US and the USSR were fierce competitors in the space race.
- The military implications of dominating Space were obvious then.
- The early space rockets were based on German V-2 rockets, which had a devastating impact late in the Second World War.
- Both Soviet and American research programmes employed German rocket scientists who developed that weapon.

What are the shortfalls in OST?

- The OST explicitly prohibits deploying nuclear weapons in space.
- The signatories also agree to forgo claims of sovereignty to celestial real estate, and to avoid harmful contamination of space.
- However, it does not ban military activity (including surveillance and science experiments with military applications).
- It does not prohibit deploying non-nuclear weapons as well.
- It is ambiguous with respect to commercial activities, such as mining, in

Space.
- There is uncertainty if the treaty's prohibitions about sovereignty automatically exclude private ownership and exploitation of off-world resources.
- So, many nations have subsequently drafted or are drafting their own rules and regulations regarding commercialising outer space.

What is the case with the U.S.?

- In 2015, the US Congress passed The Commercial Space Launch Competitiveness Act.
- This allows US citizens and industries to "engage in the commercial exploration and exploitation of space resources."
- These include water and minerals but not living creatures (if any are found).
- Going a step further, the present order encourages International Support for the Recovery and Use of Space Resources.
- More precisely, the US does not view space as "global commons".

What scope does the move offer?

- Space mining is a hugely attractive prospect.
- Many minerals in short supply on earth are abundant in space.
- Apart from rare isotopes of helium, industrial metals like lithium, cobalt, nickel, copper, zinc, niobium, molybdenum, lanthanum, europium, and tungsten are also available aplenty on asteroids.
- The U.S. order thus opens the door for prospectors and space mining companies like Planetary Resources and Deep Space Industries.
- Space miners will have to solve the many technical and logistical problems in this regard.
- Nevertheless, using robotic craft, it may be possible to mine those resources, use them to 3D-print tools onsite, and transport minerals back to earth.
- It has been speculated that the first successful space miners will become trillionaires.

What are the possible implications?

- The move could lead to a new phase of colonialism.
- Nations and private investors might develop the requisite technical capacity and end up exploiting off-world resources.
- This may lead to conflicts similar to the colonial wars that raged across Asia, the two American continents, and Africa for 300 years.
- The executive order has already been condemned by Russia.
- In effect, the order adds a new dimension to 21st century geopolitics.

What does this mean for India?

- For newcomers to the space race, like India, this is a wake-up call.
- While adhering to the OST, India must develop the ability to stake its claim if space mining does become viable.
- This involves drafting analogous legislation, and encouraging investment in cutting-edge research required to build these capacities.

Source: Business Standard

