Legal Framework for Space Missions

Why in news?

In the wake of the unprecedented space race, there comes a need to look at the international laws and domestic regulations that govern ventures into space.

What are the international laws that govern space ventures?

- **Treaties** - 5 United Nations treaties are generally thought to form the bedrock of international space law. It includes
    1. The Outer Space Treaty
    2. The Rescue Agreement
    3. The Liability Convention
    4. The Registration Convention
    5. The Moon Agreement
- **Declarations** - There are 5 declarations pertaining to space activities.
    1. Declaration of Legal Principles Governing the Activities of States in the Exploration and Uses of Outer Space - 1963
    2. Declaration governing the use of satellites for television broadcasting
    3. Declaration regarding remote sensing from outer space
    4. Declaration regarding the use of nuclear power sources in outer space
    5. Declaration on international cooperation in space exploration for the benefit of all states, particularly developing countries
- **UNGA resolutions** - There are UN General Assembly resolutions, which, though non-binding, help guide international action on the issue and may shape consensus in the space community.
- ***Res communis***— It is the concept of ownership in common by mankind of certain natural resources.
    - Example - The resources of the high seas (governed by the United Nations Convention on the Law of the Sea), or airspace above the Arctic.
- **The UN policy brief** – It recently recommended the development of a new treaty to ensure peace, security, and the prevention of an arms race in outer space.
- **A UN Summit of the Future** – It is scheduled for 2024 in New York, with advancement of the peaceful and sustainable use of outer space a potential area of work.

UN Treaties on Space Ventures

The Outer Space Treaty –1967

- It is often called the *magna carta of space law.*
- Governs the *exploration and use* of Outer Space only for peaceful purpose.
- *Prohibits the weaponisation* of space
- *No claim of sovereignty* over any bodies in space
- Liability on countries for damage caused by any objects launched into space from their territory
- Countries must help astronauts who are in distress
- Space installations and vehicles of one nation are to be open to other nations on a reciprocal basis
- *Binding* on its signatories

The Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space (ARRA) –1968

- Obligation of nations towards astronauts in distress and emergency situations, and return of space objects and astronauts.
- It includes cost of rescue and operations as covered in ***UNCLOS and Salvage Convention.***

UNCLOS (United Nations Conventions on the Law of the Sea), 1982 lays down rules governing all uses of the world's oceans and their resources.

Salvage Convention of 1989, incorporated the "'no cure, no pay" principle under which a salvor is only rewarded for services if the operation is successful.

The Convention on International Liability for Damage Caused by Space Objects –1972

- *Liable to compensate for any damages* incurred on the earth's surface or to aircraft or in outer space.
- A process to seek settlements regarding claims for the damage.
- ***No provision*** for damage caused by a rocket crashing back down to earth.

The Convention on Registration of Objects Launched into Outer Space – 1976

- *Register and maintain records* about every object launched into space and furnish those information to the U.N.

The Agreement Governing the Activities of States on the Moon and Other Celestial Bodies –1984

- Using space only for peaceful purposes.
- *Non-disruption of space environments.*
- Countries should also inform UN of the location and aim of any station established on such a body.
- *Moon and its natural resources as Common heritage of mankind.*

Of the 5 UN Treaties on Space Venture, India has ratified first four and signed Moon Agreement without ratifying it.

What are the challenges associated with space ventures?

- India's Chandrayaan-3 mission highlights the legal gray zone for lunar mining.
- **Loopholes in Space laws** – Non-appropriation clause of Outer Space treaty does not explicitly prohibit owning and using resources once they are extracted.
- **Domestic laws** – Countries like the U.S., Luxembourg, United Arab Emirates, and Japan permitted companies to claim exclusive ownership over extracted resources.
    - In 2015, the U.S. government introduced the *US Commercial Space Launch Competitiveness Act, 2015*, recognising the property rights of private entities over space resources, allowing U.S. citizens to claim such rights.
- **Issues with Artemis Accord -** *Section 10(2) of Artemis Accord* violates the principle of non-appropriation principle of Outer Space Treaty.
- *Section 11 of Artemis Accord* regarding development of 'safety zones' can result in de facto appropriation of lunar areas and the alienation of other states, thus affecting the freedom of exploration and use.
- The provisions of the Accords are also in conflict with the Moon Agreement which prevents commercial entities from taking possession of lunar natural resources.

Section 10(2) *- Signatories affirm that the extraction of space resources does not inherently constitute national appropriation*

Section 11 *- Signatories will support the development of 'safety zones' to ensure that states do not come into conflict with one another.*

- **Commercialisation of space mining-** In 2020, NASA allowed four companies to extract small amounts of lunar regolith by 2024.
- **Issue of Space Debris -** The *Kessler Syndrome* is when the total amount of space debris will grow, spurred by a chain reaction as collisions lead to more space debris.

As of date, the UN Office for Outer Space Affairs lists 43 nations that have domestic space laws, based on submissions by nations.

What about the domestic space law of India?

- **Space Policy**- ISRO released the *Indian Space Policy 2023* with the vision to enable, encourage and develop a flourishing commercial presence in space.
- **Other policies** - The Indian space industry is also subject to the *Satellite Communications Policy, 2000* and the revised *Remote Sensing Data Policy, 2011.*
- **Legislation** - A *draft Space Activities Bill* was introduced in 2017. However, it lapsed in 2019 with the outgoing Lok Sabha.
- With increasing inter-planetary missions like Chandrayaan-3 and Aditya L1, it is

imperative to have exclusive domestic space laws

- To serve as a foundation for capacity-building efforts
- To guide in the development of relevant skills and knowledge
- To attract investment and promote the growth of a domestic space industry
- For effective utilization of space resources for societal benefit in various sectors

India's Space Policy 2023
• It stipulates that any NGE (Non-Governmental Entities) shall be entitled to possess, own, transport, use, and sell any such asteroid resource or space resource obtained in accordance with applicable law, including India's international obligations. • The ISRO will move out of manufacturing space systems, and instead focus only on advancing space R&D and contributing to areas of space exploration that are of national interest. • Manufacturing and operations will be handled by *NewSpace India Limited (NSIL)* — a public sector unit set up in 2019 under the Department of Space as the commercial arm of ISRO. • *The Indian National Space Promotion & Authorisation Centre (IN-SPACe)* is expected to create a 'stable and predictable regulatory framework' that will ensure a level playing field for the NGEs.

References

1. The Hindu| Need for Space Laws
2. The Hindu Business Line| India and Moon Agreement